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ABSTRACT

This book is designed to help teachers connect "The Stock Market Game" (tm) and the school curriculum. Three key economic themes developed in the lessons include: (1) stock buyers engage in economizing behavior; (2) market economies encourage the production of wealth; and (3) market activity takes place in the context of a legal environment in which property is protected and people are protected against breach of contract, fraud, and coercion. The 24 lessons are divided into 5 units introducing the stock market, personal investing, how investing affects the economy, taking care of business, and how the economy affects investments. Lesson titles include: (1) "Why Study the Stock Market?"; (2) "What Is a Corporation?"; (3) "What Is a Stock? Or, Who Owns McDonald's?"; (4) "What Are Markets?"; (5) "Showtime on Wall Street"; (6) "How Are Stock Prices Determined?"; (7) "How to Read the Stock Tables"; (8) "How Do You Make or Lose Money in the Stock Market?"; (9) "Getting Fancy: The Bulls, the Bears, and the Pigs!"; (10) "Are Stock Markets Only for the Wealthy?"; (11) "Getting Rich is Child's Play--The News About Compound Interest"; (12) "All Savings Choices Involve Risk: Grandma's Gift"; (13) "Some Risks Are Greater than Others"; (14) "How to Choose a Stock"; (15) "Building a Stock Portfolio"; (16) "Playing Along with the Averages"; (17) "The Market-Go-Round"; (18) "I've Got the Workin' in the Chalk-Mark Factory, Increasing My Productivity Blues"; (19) "How Do Saving and Investing Affect Economic Growth?"; (20) "How Do Businesses Obtain Financing?"; (21) "How to Read an Annual Report"; (22) "Researching a Business"; (23) "Business Cycles and the Stock Market"; and (24) "How Do Domestic and International Events Influence the Buying and Selling of Stocks?" Lessons are classified for beginning, intermediate, and advanced level students. (EH)

Learning from the Market:

Integrating The Stock Market Game™ across the Curriculum

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Integrating The Stock Market Game™ Across the Curriculum

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EconomicsAmerica
National Council on
Economic Education
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business, and labor

Members of the National Design Team

R. J. Charkins
California State University, San Bernardino
San Bernardino, California

Donald G. Fell
Florida Council on Economic Education
Tampa, Florida

Gail Funk
University of Delaware
Center for Economic Education
Newark, Delaware

Harold Gilbert
Westside High School
Anderson, South Carolina

Melinda Patterson Grenier
Wall Street Journal Classroom Edition
New York, New York

DeAnn Huinker
University of Wisconsin–Milwaukee
Milwaukee, Wisconsin

Trina H. Krieger
Georgia State University
Center for Economic Education
Atlanta, Georgia

Anthony Lamport
Securities Industry Association
Foundation for Economic Education
Trustee
New York, New York

Katherine Phillip
Securities & Exchange Commission
Washington, DC

Gloria Talamas
Securities Industry Foundation for Economic Education
New York, New York

Project Director

Mark C. Schug
University of Wisconsin–Milwaukee
Milwaukee, Wisconsin

Writers

Mark C. Schug
University of Wisconsin–Milwaukee
Milwaukee, Wisconsin

Kathleen Ryan Johnston
Milwaukee Public Schools
Milwaukee, Wisconsin

John S. Morton
Collegiate School
Richmond, Virginia

Donald R. Wentworth
Pacific Lutheran University
Department of Economics
Tacoma, Washington

Chief Economist

R. J. Charkins

Mathematics Education Specialist

DeAnn Huinker

Senior Editor

Richard D. Western
University of Wisconsin–Milwaukee
Milwaukee, Wisconsin

Field Test Teachers

Steven Carlovsky
Salem Lutheran School
Milwaukee, Wisconsin

Jennifer J. Fontanini
Wauwatosa School District
Wauwatosa, Wisconsin

Jill Koebernik
Milwaukee Public Schools
Milwaukee, Wisconsin

Stephanie D. Todd
Milwaukee Public Schools
Milwaukee, Wisconsin

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FOREWORD

Peter Lynch, Vice Chairman
Fidelity Management & Research Company

I have never understood why entire courses are devoted to languages, history, science, but not to investing and all its benefits.

Politicians come and go, wars are won and lost, but investing (or the lack of it) affects the daily lives of every person, every family, every company, and every country in today's world. Whether we are talking about the Japanese or the Brazilians or the Americans, the head of General Motors, or the students in your classroom, those who save and invest for the future will be better off financially (and because of that, better off in other ways) than those who do not.

Since the junior high schools and the high schools do not generally offer Investing 101, it's a lucky thing we have teachers like you who have decided to introduce this material. *The Stock Market Game* is an exciting way to put stocks and young people together, but who wins and who loses after a few weeks or months is not the important part. The important part is that the players in the Game come away with a basic understanding of capitalism, and how investing and saving creates jobs.

Students are often amazed to find out they are surrounded by thousands of public companies, including the ones that depend on kids to stay in business (Nike, Disney, and Marvel Comics come to mind). They are even more amazed to find out they can become an owner of one or several of these companies, by buying shares. It's always a thrill to walk into a McDonald's or a Circuit City knowing that you're part owner of the place. That thrill is one of the perks of becoming an investor.

Investing is not only about investors making money. The fate of the world is in the investors' hands. Without investors, there would be no businesses, and without businesses there would be no jobs and no government, because people would have no income to pay the taxes that support the government.

If students are inspired to invest on their own, so much the better. The earlier a person gets started down this path, the more likely the long-term results will be profitable. Naturally, if I were teaching this material, I'd emphasize that stocks offer the best chance to create wealth over time, both for the people who own the stocks and for the companies that grow and expand with the money that's raised from the stock market.

The lesson plans for "Learning From the Market" are down to earth and easy to use, either as a complement to *The Stock Market Game* or as an introduction to capitalism and investing on its own. I hope you and your students enjoy it. Maybe some of them will be thanking you someday for leading them down this exciting path.

Peter Lynch
with John Rothchild

INTRODUCTION

Learning from the Market
Integrating *The Stock Market Game* across the Curriculum

The Stock Market Game is a highly successful national program that engages young people in the study of securities markets. Hundreds of thousands of students participate each year in *The Stock Market Game*. Teachers often use the spark of interest it generates as the vehicle for introducing students to the basics of how our market economy operates. This curriculum guide is designed to help teachers connect *The Stock Market Game* and the school curriculum. *Learning from the Market* links the excitement of *The Stock Market Game* to a broader introduction to economics in the context of the school curriculum—involving social studies, mathematics, business, and language arts.

Economic Themes

Learning from the Market introduces young people to the fundamentals of how a market economy operates. The lessons in Unit I, Introducing the Stock Market, are mainly of this sort. The lessons in Unit I also coincide with how many teachers introduce the *Stock Market Game* to their students.

In addition to some basics about the stock markets, three key economic themes in several of the lessons introduce students to how a market economy functions. First, *Learning from the Market* stresses the idea that stock buyers engage in economizing behavior. Like others, people interested in stock ownership are trying to gain the best combination of costs and benefits as they consider making their decisions. Second, *Learning from the Market* emphasizes the importance of how market economies, with their encouragement of private ownership of stock and voluntary exchange, encourage the production of wealth. The vital role that securities markets play in channeling private savings to productive investments is stressed. Third, students learn to recognize that all this market activity takes place in the context of a legal environment in which property is protected and people are protected against breach of contract, fraud, and coercion.

Learning from the Market offers teachers from several disciplines a practical tool for curriculum integration. Several of the following Key Features illustrate this emphasis.

Key Features

CLASSROOM-TESTED LESSONS

This curriculum guide includes 24 classroom-tested lessons.

CROSS CURRICULUM SKILLS

Each lesson includes a quick overview explaining how the lesson integrates with various parts of the curriculum. Areas of the curriculum represented include business, language arts, mathematics, economics, and other social studies.

LANGUAGE OF ECONOMICS

Each lesson provides background information on economics. The *Language of Economics* section in each lesson provides definitions of economic and business terms. The terms are also defined in the Glossary.

STEP-BY-STEP PROCEDURE

Detailed teaching procedures state an explicit purpose for each lesson and include suggestions for engaging students' interest. Each lesson also provides a closure activity suggesting ways for teachers to conduct a deliberate review of the lesson's key points.

MATHEMATICS AND LANGUAGE ARTS

Social studies and business content appears throughout the lessons. Icons identify mathematics and language arts content and skills.

A ✎ designates mathematics and a ✍ designates language arts.

INSTRUCTIONAL MATERIALS

The materials needed to teach the lessons are all in this package. Included are handouts for students and visuals for the overhead projector. The materials provide the necessary support for a variety of teaching activities, including readings, case studies, simulations, role-plays, class discussions, and demonstrations.

ASSESSMENTS

Each lesson suggests possible assessment measures, including multiple-choice questions with answers, essay items with answers, and a journal writing activity.

LEVEL

There are three lesson classifications. *Beginning Lessons* are basic lessons essential to understanding the stock market. All teachers who participate in *The Stock Market Game* should consider using these lessons. *Intermediate Lessons* are at a higher level and offer more economics content. The lessons are appropriate for older, more capable students. *Advanced Lessons* provide students with more sophisticated economics content and are designed for high school students.

WHAT PEOPLE ARE SAYING ABOUT *LEARNING FROM THE MARKET*

Learning from the Market and *The Stock Market Game* provide an excellent context for learning and applying mathematical ideas. It is the sort of context envisioned in the curriculum standards developed by the National Council of Teachers of Mathematics. By applying mathematics to solve problems, students will learn to value the role of mathematics in our culture and society.

DeAnn Huinker
Associate Professor
University of Wisconsin-Milwaukee

These lessons give us down-to-earth examples and teaching strategies to explain questions about the stock market that we have asked ourselves or that students have asked us. As a classroom teacher, I am grateful that someone has come up with innovative teaching strategies about the stock market that I can use. I believe that teachers will be able to incorporate these lessons into their curriculum because they are very user friendly.

Harold Gilbert
Westside High School
Anderson, South Carolina

I really liked these lessons. They'll challenge students mathematically and in several other subjects. Hands on! Charts are clear and easy to use.

Steve Carlovsky
Salem Lutheran School
Milwaukee, Wisconsin

I think these lessons are great! Good teacher instructions, easy to follow and understand. Great way to introduce students to the market—sparks interest in companies and what they make.

Jennifer Fontanni
Wauwatosa School District
Wauwatosa, Wisconsin

TABLE 1
INTEGRATING THE CURRICULUM

Lesson Number	Social Studies	Mathematics	Business	Language Arts
1	✓	✓	✓	✓
2	✓	✓	✓	✓
3	✓		✓	✓
4	✓		✓	✓
5	✓		✓	✓
6	✓	✓	✓	✓
7	✓	✓	✓	✓
8	✓	✓	✓	✓
9	✓	✓	✓	✓
10	✓	✓	✓	✓
11	✓	✓	✓	✓
12	✓		✓	✓
13	✓	✓	✓	✓
14	✓		✓	✓
15	✓	✓	✓	✓
16	✓	✓	✓	✓
17	✓		✓	✓
18	✓	✓	✓	✓
19	✓	✓	✓	✓
20	✓		✓	✓
21	✓	✓	✓	✓
22	✓	✓	✓	✓
23	✓	✓	✓	✓
24	✓		✓	✓

TABLE 2
ECONOMIC CONCEPTS

Economic Concept	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Business Cycle																							O	
Capital														O	O		O		O	O				
Capital Market																				O				
Circular Flow																	O							
Competition				O																				
Corporation		O																						
Demand				O		O										O							O	
Economic Growth																			O					
Economize	O	O	O						O	O	O	O		O							O	O		
Entrepreneurship																	O							
Equilibrium Price				O		O		O					O											
Factors of Production																	O							
Human Capital															O				O					
Incentive										O											O	O		
Interest											O													
Investment															O				O					
Labor																	O							
Land																	O							
Market				O	O		O									O								
Market Economy				O																				
Opportunity Cost									O		O													
Ownership			O																					
Partnership		O																						
Private Property Rights				O															O					
Product Markets																	O							
Productivity																		O						
Profit			O	O														O			O	O		
Real Gross Domestic Product																							O	
Recession														O									O	
Resource Markets																	O							
Resources				O																				
Saving	O										O								O					
Sole Proprietorship		O																O						
Specialization																		O						
Standard of Living																		O						
Stock			O		O																			
Stock Market	O				O																			
Supply				O		O										O								O
Unemployment Rate																							O	
Voluntary Exchange				O																				

EVALUATION FORM

You can help to improve future editions of *Learning from the Market: Integrating The Stock Market Game Across the Curriculum* by sending us your evaluation. Please circle the appropriate number for each item below, describe your thoughts on the next page, and then mail the form to the following address:

Securities Industry Foundation for Economic Education, Inc.
c/o Securities Industry Association
120 Broadway, 35th Floor
New York, NY 10271

Name: (optional) ______________________________
Grade of students: ______________________________
Course or subject: ______________________________
School or affiliation: ______________________________
Address: ______________________________
____
____

Part I: 1. **Organizational Format**

Excellent				Poor
5	4	3	2	1

2. **Content and skills related to curriculum integration**

Excellent				Poor
5	4	3	2	1

3. **Content: Information related to securities industry**

Excellent				Poor
5	4	3	2	1

4. **Content: Application of economics to securities industry**

Excellent				Poor
5	4	3	2	1

5. **Objectives**

Clear				Vague
5	4	3	2	1

6. **Teaching procedures**

Easy to understand				Difficult
5	4	3	2	1

7. Interest level of activities

Interesting				Uninteresting
5	4	3	2	1

8. What is your evaluation of the guide's effectiveness as a teaching tool?

Excellent				Poor
5	4	3	2	1

9. What is your overall rating of the guide?

Excellent				Poor
5	4	3	2	1

Part II: Please describe below any suggestions you have for making this guide a more effective publication. If possible, also include samples of additional materials that you think should be considered for the next revision.

LESSON 1
WHY STUDY THE STOCK MARKET?

INTRODUCTION

This lesson is designed to spark student interest in the stock market and help the teacher learn what students already know or believe about the stock market.

ECONOMICS BACKGROUND

Stock markets allow people to use their savings to buy stocks. People who buy stocks do so hoping that the stocks will increase in value, thus making their savings grow. All investment decisions involve some risk, however, and people buying stock must also consider that their stock might not increase in value. Stock markets are important to nearly everyone. Because they affect so many people, they are regulated by the federal government even though they are private institutions.

LANGUAGE OF ECONOMICS

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits among the alternatives.

Risk: The chance of losing money. Risk is the opposite of safety.

Saving: Setting aside some of today's income for future spending.

Stock Market: A market in which the public trades stocks it already owns.

CROSS CURRICULUM SKILLS

Students develop skills in listening, reading, and group participation. They use computation to solve problems.

OBJECTIVES

1. Students demonstrate their current knowledge of and interest in stock markets.

2. Students decide how to invest a hypothetical inheritance of $100,000, weighing the costs and benefits involved.

MATERIALS

- Visual 1
- Activities 1 and 2
- An 8½″ x 11″ piece of paper for each group, with a large "T" printed on one side and a large "F" printed on the other side. Another 8½″ x 11″ piece of paper for each group, with "Double Down" written on one side. Students use the paper to record their answers to the questions.

TIME REQUIRED

One class period

PROCEDURE

A. Explain that the purpose of this lesson is to find out from the students what they already know about the stock market, to correct some common misconceptions, and to introduce students to some of the risks involved in deciding how to use savings.

B. Divide the class into groups of three. To each group, distribute one sheet of paper with a "T" on one side and an "F" on the other, and one sheet with "Double Down" written on it. Distribute Activity 1, *Your Stock Market IQ Score Sheet*, to each student.

C. ✎Explain the rules for the Stock Market IQ Quiz.

1. Choose a spokesperson for each group.

2. All students in the group have to tell the spokesperson what they think the right answers are for the questions on Visual 1.

3. A group majority prevails whenever the group disagrees on what the right answer is.

4. The spokesperson must hold up a small sign with either *true* or *false* printed on the sign to indicate the group's decision on the question. The spokesperson must also hold up the Double Down sign if the group wants to use this option.

5. Each group gets five points for each correct answer. Each group loses five points for each incorrect answer.

6. Each group can choose to double-down on any question up to a total of five questions. If the group answers correctly, it receives 10 points; if the group answers incorrectly, it loses 10 points from its current score. Groups use this tactic on questions they are most confident about answering correctly.

7. A total of 100 points is a perfect score. To earn this score, students must answer all questions correctly and double-down correctly on five questions.

D. Any group able to achieve a score of 90 or more is rated Market Guru. Any group achieving a score between 70 and 89 is rated Market Analyst. Any group achieving a score between 50 and 69 is rated Market Novice. Groups scoring below 50 are rated Market Challenged.

E. Display Visual 1, *A Stock Market IQ Quiz*, on the overhead projector. At first, keep all the questions covered. Show the students one question at a time so students do not see them all at once.

F. For each question, ask students to decide in their group if they think the statement is true or false. Then the spokesperson holds up the True/False sign to show the group's decision to the class. The group should also hold up the Double Down sign if this strategy was chosen for this question. Make sure these sheets are raised simultaneously to discourage some students from waiting to see what other students have decided. The correct answers appear at the end of the teacher directions for this lesson.

G. While students keep track of their scores, keep a point total on the chalkboard so that each group can see how it is performing relative to other groups. Groups will use this information to decide when to go Double Down.

H. When the class completes the quiz, ask them to summarize what they have learned about the stock market while taking this quiz.

I. ✍ Distribute Activity 2, *Uncle Mort's Money*, and ask the students to read the story. In small groups, students should decide what they intend to do with Uncle Mort's money, weighing the costs and benefits involved. They will present their solution to the class.

J. Ask students what Uncle Mort's story has to do with the statements in the Stock Market IQ Quiz.
(Jody has to decide what to do with Mort's savings. If she understands how the stock market works, she may be able to keep the money safe and make it grow by purchasing stocks.)

K. Ask students if there is risk if a person puts money in a bank or leaves it at home.
(Yes, each of these choices involves risk. Banks may not pay enough interest to compensate for changes in inflation; money left at home may be lost or stolen easily and does not earn interest.)

CLOSURE

Review the main points of the lesson:

1. Stock markets allow people to benefit from growth in private businesses.

2. No decision to save money is without cost or risk.

ASSESSMENT

Multiple Choice Questions

1. Which of the following decisions will guarantee that a person will make money in the stock market?
   a. Buy the stock of a big company like IBM.
   b. Buy the stock of a small company like Starbucks Coffee.
   c. Purchase stocks after the stock market has dropped for two days in a row.
   *d. None of these decisions will guarantee that an individual will make money in the stock market.

2. If a company starts purchasing its own stock, what are the company leaders attempting to do?
   a. To raise company profits
   b. To increase company expenses
   *c. To show that the company believes the price is too low
   d. To confuse the Securities and Exchange Commission

ESSAY

✍ Imagine you hear someone make the following statement: "Stock prices mean nothing. Every day they change, up or down. It is just a way to cheat the public and take their money. I don't understand why the government keeps changing those prices." Based on what you have learned in this lesson, write this person a letter, commenting on his or her misunderstandings.
(Stock prices do change, but the government does not change them. Buyers and sellers of stocks cause the prices to change each day as they decide how valuable those stocks are to them. Changing stock prices show how people's buying and selling decisions will change when they hear news that indicates how well this company is performing in the economy.)

JOURNAL

✍ Read the stock market section of the business page of a newspaper for three days. Identify five terms or ideas you do not understand which seem important to understanding how the stock market works. Share these unknowns with your classmates and teachers so everyone can help one another understand key ideas while learning about the stock market.

Answers to the Stock Market IQ Quiz

1. **Stocks are items found in the storeroom of a grocery store.**
   False. *Stocks are shares of ownership of companies. These shares are sold to the public in markets around the world. The three largest stock markets in the United States are the American Stock Exchange, the Nasdaq Stock Market, and the New York Stock Exchange.*

2. **Only rich people invest in the stock market.**
   False. *Millions of people invest in the stock market through mutual funds, individual purchases of stock, and pension investments. Very wealthy people make up only a small portion of stock market investor population.*

3. **Most stocks on the stock market are sold by the United States Government.**
   False. *The United States Government does not sell stocks of private companies. These private company stocks are sold in stock markets like the AMEX, Nasdaq, and NYSE.*

4. **If the stock market goes up 30 percent one year, it will fall by 30 percent in the next year.**
   False. *The prices of stocks on the stock market change as the supply and demand for stocks change. They can change at any rate, or prices can stay the same for a long time. How much they move up does not forecast how far they may fall. Over the long term, stocks have appreciated by 9 percent.*

5. **Any stock that goes up in price must eventually come back down.**
   False. *Stock prices will usually not fall if the company remains successful and other investments do not become more attractive. Stock prices reflect the interests of investors. The law of gravity does not apply to stock prices.*

6. **Bears, Bulls, and Pigs are found in the stock market.**
   True. *These names refer to people and their attitudes toward stock market performance. Bulls are people who think the market will continue to rise; Bears think stock prices are very likely to fall; Pigs are people who try to make a big killing on the market in a short time and tend to get "slaughtered"—in other words, they lose all their money on high-risk investments.*

7. **Stock prices are set by the Securities and Exchange Commission, a regulatory agency of the U.S. government.**
   False. *Stock prices are set by the supply and demand for stocks. The Securities and Exchange Commission regulates the stock markets to insure honest practices are followed and accurate information is provided to buyers and sellers of stocks.*

8. **Stock markets are open on business days around the clock, around the world.**
True. *Stock markets exist in many different countries located in different time zones, so markets in Europe and Asia are open and in operation while U.S. citizens are sound asleep in their beds.*

9. **Sometimes companies buy their own stocks on the stock market.**
True. *A company for a variety of reasons may wish to have its stock price increase in value. One way a company might be able to increase the price of its stock is by buying its own stock.*

10. **It is hard to buy a good stock today because all the good ones have already been purchased.**
False. *All "good" stocks are available for sale in large quantities. Just because someone currently owns them does not prevent investors from buying the stocks. The new investor just must offer a price attractive enough so current owners have an incentive to sell their stocks.*

11. **Buying stocks is a sure way to make money.**
False. *The prices of stocks rise and fall, depending upon economic conditions and business success. Many people have lost money by buying stocks when the prices were high and selling them after prices fell. There is risk in the stock market. It is not a sure way of making money.*

12. **Corporations sell new issues of stock on the New York Stock Exchange.**
False. *New issues of stock are purchased by investment bankers (primary market) who will offer stocks to be resold to the public (secondary market).*

13. **"Insider" stock trading means that trading stocks takes place inside a building.**
False. *"Insider" stock trading refers to the illegal practice of people related to a company who find out important information about a company that will affect the stock price and buy or sell the stock before the information is made available to the general public. An "insider" may be an accountant who knows that a company's profits are greater than anticipated by the public because that accountant just finished preparing the accounting report for the company. If that accountant buys stocks before the report is made, she or he could buy the stock at a lower price than what other buyers will have to pay after the report is made public. In such a case, she or he would illegally benefit from this "insider" information.*

14. **People can buy stocks on the Internet.**
True. *Many electronic methods exist that allow people to buy stocks without talking directly with a person. One method brokerage firms use is to allow people to buy stock with computers using the Internet (the electronic superhighway). It allows people to make trades quickly and inexpensively.*

15. **When the stock market goes up, it causes the economy to grow.**
False. *The stock market is a very small part of the economy. It cannot cause the economy to grow or decline. It is one leading indicator of the economy, so when the stock market goes up it does signal that many people think the economy will grow in the near future. Sometimes they are right, and sometimes they are wrong. The stock market cannot make people and companies in the economy improve their production of real goods and services.*

VISUAL 1
A STOCK MARKET IQ QUIZ

1. Stocks are items found in the storeroom of a grocery store. T or F
2. Only rich people invest in the stock market. T or F
3. Most stocks on the stock market are sold by the United States Government. T or F
4. If the stock market goes up 30 percent one year, it will fall by 30 percent in the next year. T or F
5. Any stock that goes up in price must eventually come back down. T or F
6. Bears, Bulls, and Pigs are found in the stock market. T or F
7. Stock prices are set by the Securities and Exchange Commission, a regulatory agency of the U.S. government. T or F
8. Stock markets are open on business days around the clock, around the world. T or F
9. Sometimes companies buy their own stocks on the stock market. T or F
10. It is hard to buy a good stock today because all the good ones have already been purchased. T or F
11. Buying stocks is a sure way to make money. T or F
12. Corporations sell new issues of stock on the New York Stock Exchange. T or F
13. "Insider" stock trading means that trading stocks takes place inside a building. T or F
14. People can buy stocks on the Internet. T or F
15. When the stock market goes up, it causes the economy to grow. T or F

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ACTIVITY 1
YOUR STOCK MARKET IQ SCORE SHEET

Name ______________________ **Date** ______________________

1.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
2.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
3.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
4.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
5.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
6.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
7.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
8.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
9.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
10.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
11.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
12.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
13.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
14.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______
15.	True or False (circle one)	Score	(−5 or +5) (double down −10 or +10)	______

ACTIVITY 2
UNCLE MORT'S MONEY

Name ______________________ **Date** ______________________

Jody loved Uncle Mort. When Mort died, she missed him. It was only five years ago that Uncle Mort had bought a home two blocks away from her home. She visited him every day just to enjoy his company and to help him remember where things were. He was forgetful about everything except Jody. He forgot where he left his car keys, his eyeglasses, or the TV remote, but forgetting about money was the really big problem. He always left cash around the house. Jody would find dollar bills scattered around the house and give them back to Uncle Mort. "You should put this money in a safe place, Uncle Mort," she would say. Uncle Mort would reply, "Jody, there is no safe place for money."

Uncle Mort could not travel much. His lungs were bad. Jody asked her father why Uncle Mort had such health problems and why he was so forgetful. "It's probably a result of the blow to the head he received in the Honduras demonstrations," Jody's father explained. "Your Uncle Mort has lived an interesting life. He was a brilliant student who dropped out of college to write educational software for schools. His specialty was economic fables and myths which became classics both in the computer software field and in children's literature. He retired early—a wealthy man determined to help people in poor countries. For 20 years he worked in Latin America, helping farmers in Honduras and Colombia switch to profitable crops other than bananas and cocaine. Later he helped Brazilian Indian tribes sell Rain Forest products, before moving on to encourage Chinese government workers to set up their own businesses. In each country he got into trouble with authorities who didn't like the changes. This trouble resulted in an occasional beating or prison stay, but he avoided even more trouble because he always carried cash, U.S. dollars. He used the money to pay people not to harm the poor people he worked with. He always carried U.S. dollars, and he never used banks.

After Uncle Mort's death, Jody helped her father clean up Uncle Mort's home and prepare it for sale. It was at that time she found out about Uncle Mort's will. According to Dad, Uncle Mort left all his belongings to his brother, Jody's father, except for the money in the house. Any money found in the house was Jody's to use as she wished. In his will, Uncle Mort asked her to find a safe place for the money.

It took Jody and her father two days to clean Mort's house completely. As they cleaned, they kept finding money in different places—$100 in the cupboard, $10 in the cookie jar, a bag of coins in the toilet tank. But the real discovery came when they took the mattress off the bed. Money fell out of a slit in the bottom of the mattress. When they gathered it all up, and added it together with the other money found earlier, the total came to $100,000.

"Well, Jody," her father asked, "what is the safe place where you are going to put the money?"

ACTIVITY 2 (CONTINUED)

Questions for Discussion

As a group, decide what you think Jody should do with the money. You can choose among the following alternatives. Discuss the potential costs and benefits of each.

	Costs	Benefits
• Buy five expensive Ford Mustangs, one for each school day of the week.		
• Put the money in a bank savings account.		
• Invest the money in IBM stock.		
• Put the money in Jody's mattress.		
• Other ideas?		

Prepare a chart that summarizes your thinking about the costs and benefits of each alternative. Make a short presentation to the class, explaining how you weighed the costs and benefits as shown on your chart. Conclude by stating your group's decision. Be prepared to answer questions.

LESSON 2

WHAT IS A CORPORATION?

INTRODUCTION

In this lesson, students learn about different types of business organization. In a role-playing activity, they offer advice to people interested in beginning or expanding businesses.

ECONOMICS BACKGROUND

Business firms differ from one another. They provide a wide array of different goods and services. Yet, despite this diversity, there are only a few forms of business organization; these forms are the corporation, sole proprietorship, and partnership. Each one of these forms of business organization has distinctive characteristics that may lead to costs or benefits for producers and consumers.

LANGUAGE OF ECONOMICS

Corporation: A business that is owned by stockholders and is entitled legally to rights and responsibilities as if it were a person.

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits among alternatives.

Limited Liability: A legal guarantee that a stockholder's maximum loss is legally limited to the amount he or she has invested in a corporation's stock.

Partnership: A business that is owned and managed by two or more individuals who receive all profits and bear all losses.

Sole Proprietorship: A business that is owned and managed by one individual who receives all the profits and bears all losses.

CROSS CURRICULUM SKILLS

Students develop skills in reading, writing, speaking, and group participation. Students construct and interpret a circle graph.

OBJECTIVE

Students explain the advantages and disadvantages of different forms of business organization, including sole proprietorships, partnerships, and corporations.

MATERIALS

- Visuals 1, 2, and 3
- Activity 1
- Ten paper clips for each pair of two students

TIME REQUIRED

One class period

PROCEDURE

A. Explain that in this lesson students will be acting as financial advisors to people who are interested in beginning or expanding a business. They will assist these people in choosing a form of business organization, basing the choice on an assessment of costs and benefits.

B. Tell your students that before they begin providing advice to others, you will present a brief "management seminar" on the different forms of business organization and their costs and benefits.

C. Display Visuals 1, 2, and 3. Define *sole proprietorship, partnership*, and *corporation*, and explain the costs and benefits of each.

D. ✍ Distribute Activity 1, *Fickle Financial Services*. Explain the instructions in Part 1. Divide the class into five groups and assign each group one of the five clients in Part 2. Each group should suggest what type of business its client should form.

E. Invite a student from each group to report on the group's decisions. While the answers may vary, the following are the anticipated responses:

Answers to Activity 1

Client 1: Sole proprietorship: easy to start, not much financial capital required.
Client 2: Partnership: would provide financial capital, personal satisfaction, and business skill.
Client 3: Corporation: would provide financial

capital and business skill.
Client 4: Corporation: would provide financial capital.
Client 5: Corporation: would provide financial capital and business skill.

F. ✎ Explain to the students that their next task is to illustrate the number of American businesses by type of ownership. The students should do this by making a pie graph. Ask the students to work in pairs. Distribute 10 paper clips to each pair. Explain that each paper clip represents ten percentage points. Ask the students to link all ten paper clips end to end; arrange the clips in a circle on a single sheet of paper; and place a dot in the center of the circle. Explain that seven of the clips represent sole proprietorships. Ask the students to underline these seven clips and draw lines to the center dot, showing the area represented. Explain that two clips represent corporations, and the remaining one clip represents partnerships. The students should also draw lines to the center dot, showing the area represented by corporations and partnerships. Tell the students to label each section of the pie graph. Ask:

1. What percent of businesses are sole proprietorships? (*70 percent*) Corporations? (*20 percent*) Partnerships? (*10 percent*)

2. Which type of business ownership is most widespread in the United States?
   (*Sole proprietorships*)

3. Why do you think sole proprietorships are so widespread?
   (*While there are risks involved, sole proprietorships are often easy to start. The wish to earn a profit is a powerful incentive.*)

4. Which types of business ownership are less common in the United States?
   (*Corporations and partnerships*)

G. Explain that even though the corporate form of organization represents a smaller percentage of businesses than the other forms do, it accounts for the largest percentage of sales. How can this be?
(*Corporations tend to be many times larger than the average-size proprietorship; corporate sales therefore are much larger even though the number of corporations is smaller.*)

CLOSURE

Review the main points of the lesson:

1. What are the key advantages of a sole proprietorship?
   (*Ease of starting and going out of business; control over profits and business operations; pride of ownership; lower taxes*)

2. What are the key advantages of a partnership?
   (*Easier to raise financial capital; combines managerial skills; personal satisfaction; lower taxes*)

3. What are the key advantages of a corporation?
   (*Limited liability; greater financial capital, unlimited life; specialized management*)

ASSESSMENT

Multiple Choice Questions

1. Which form of business organization is most common in the United States?
   a. Corporations
   *b. Sole proprietorships
   c. Partnerships
   d. Cooperatives

2. A key advantage of corporations is that they allow
   *a. greater financial capital.
   b. lower taxes.
   c. unlimited liability.
   d. lower sales.

ESSAY

✎ Tom Wagner is 20 years old. He has owned and operated Tom's Green Thumb Lawn Maintenance since his second year in high school. It has gone from being an after-school and part-time job to a full-time, highly profitable business. The business has grown to the point where Tom now has 50 different accounts and employs three full-time and eight part-time employees. Tom is concerned that the business is getting too big for him to manage. He is also concerned about being liable for the losses the business might suffer some day. What

type of business organization should Tom consider? Explain.
(Tom should consider forming a corporation. This move would help him reduce his personal risk of financial loss, hire more specialized management, and expand the business. However, if he decides to incorporate, he will no longer be able to keep all the profits, he will pay more in taxes, and he will be more closely regulated by the government.)

JOURNAL

✍ Use the telephone yellow pages to identify three businesses—one that seems to be a sole proprietorship (JA's Restaurant), a partnership (Smith and Smyth: Attorneys at Law), and a corporation (Jason's Means Junk, Inc.) Call each business and ask for an interview with a manager. Ask the manager why the business has chosen its form of business organization. Also ask the manager how his or her job is affected by the form of business organization. Write up the results of your interviews in your journal.

VISUAL 1
SOLE PROPRIETORSHIP

Sole Proprietorship: A business that is owned and managed by one individual who receives all the profits and bears all the losses.

Benefits

- Ease of starting and going out of business
- Control over profits and business operations
- Pride of ownership
- Lower taxes (pays no corporate income taxes)

Costs

- Unlimited liability
- Difficulty in raising financial capital
- Responsible for all losses
- Management knowledge may be limited

VISUAL 2

PARTNERSHIP

Partnership: A business that is owned and managed by two or more individuals who receive all the profits and bear all the losses.

Benefits

- Easier to raise financial capital
- Partners may combine managerial skills
- Personal satisfaction
- Lower taxes (pays no corporate income taxes)

Costs

- Unlimited liability
- Shared profits
- Possible conflicts between partners
- Possible instability after death of a partner

VISUAL 3
CORPORATIONS

Corporation: A business that is owned by stockholders and has rights and responsibilities as if it were a person.

Benefits

- Limited liability
- Greater financial capital
- Unlimited life
- Specialized management

Costs

- Increased taxation (pays corporate income taxes)
- Difficulty in starting (each state has its own rules for a corporate charter)
- May be larger, more bureaucratic than other forms of business
- Increased government control

ACTIVITY 1
FICKLE FINANCIAL SERVICES

Name ______________________ **Date** ______________________

Part 1: Your Job

You run a small consulting business giving advice to people who are thinking about starting up their own business. For a small fee, you offer your customers advice on the best way of organizing a business. Your business has been successful because you understand clearly the advantages and disadvantages of various forms of business organization. You ask what is most important to future business operators and compare their interests with the benefits and costs of various types of business organization.

Sole proprietorship: A business that is owned and managed by one individual who receives all the profits and bears all the losses.	***Benefits*** • Ease of starting and going out of business • Control over profits and business operations • Pride of ownership • Lower taxes (pays no corporate income taxes) ***Costs*** • Unlimited liability • Difficulty in raising financial capital • Responsible for all losses • Management knowledge may be limited
Partnership: A business that is owned and managed by two or more individuals who receive all the profits and bear all the losses.	***Benefits*** • Easier to raise financial capital • Partners may combine managerial skills • Personal satisfaction • Lower taxes (pays no corporate income taxes) ***Costs*** • Unlimited liability • Shared profits • Possible conflicts between partners • Possible instability after death of a partner
Corporation: A business that is owned by stockholders and has rights and responsibilities as if it were a person.	***Benefits*** • Limited liability • Greater financial capital • Unlimited life • Specialized management ***Costs*** • Increased taxation (pays corporate income taxes) • Difficulty in starting (each state has its own rules for a corporate charter) • May be larger, more bureaucratic than other forms of business • Increased government control

ACTIVITY 1 (CONTINUED)

Part 2: Your Clients

Read and discuss each client case. Then make a recommendation about what form of business organization you think is best for each. Be sure to state reasons to support your position.

Client 1

I am 16 years old and I love little kids. I like to organize special events—like birthday parties for children. I have decided that a great way to earn extra money is to provide families with children's birthday parties for a modest fee. I do it all—arrange the food, supply the music, decorate the party room, play games, give away small prizes, even play the part of Bongo, the Birthday Clown. Families I know love the idea. I have an advertising plan figured out, with posters to put up at the local grocery stores.

What type of business organization do you recommend? Why?

Client 2

I am 27 years old and have just finished law school and passed the state bar examination. Now I am ready to begin my new career as a lawyer. I am not interested in a job with a big firm. I'd like to be more on my own. I have two friends who are in similar situations. But it takes money to start a law practice. A modern law firm needs a lot of business machines—computers, copiers, fax machines, and so on. Even in a small firm the lawyers might need to hire some helpers—a receptionist, maybe a paralegal worker. I want this firm to be a success, but I am not sure I have all the legal and business skills I need to pull it off.

What type of business organization do you recommend? Why?

Client 3

I am 35 years old and have been running three successful bookstores for five years. My customers think I have the right mix of books to appeal to younger and older readers. My "coffee-house nights" which feature local authors reading passages of their books to espresso-drinking customers have been a big hit. I am thinking about expanding to eight stores. I have identified the new locations. They seem just right. My two biggest problems are that I do not have enough money to support this expansion and I am not sure I have the skill to manage all eight locations.

What type of business organization do you recommend? Why?

Client 4

My business partner and I are 25 and 26 years old. We run a small but growing business. We buy auto parts made in Taiwan for American cars. Then we sell the parts to auto repair shops in five cities in our state and two cities in nearby states. We are now getting requests for our auto parts from auto repair dealers in four new states. To meet these requests, we will need a major expansion of our warehouse and we will need to hire some new employees.

What type of business organization do you recommend? Why?

Client 5

I am a 45-year-old agricultural scientist. I have been working for years to come up with a natural egg that is free of cholesterol and low in fat. I finally have completed all the tests and have received all the government approvals I need for my new eggs. Up until now, my work has been simple and I have been my own boss. But now I want to launch my new product—Eggs You Can Love—on a national scale.

What type of business organization do you recommend? Why?

LESSON 3

WHAT IS A STOCK? OR, WHO OWNS McDONALDS?

INTRODUCTION

Private ownership is fundamental to the operation of a market economy. This lesson introduces the idea that individuals can become owners of a business by purchasing stock.

ECONOMICS BACKGROUND

People who buy stock in corporations are owners of that corporation. They risk their money (personal wealth) on the success of the business. Any business is risky because the future is uncertain. The owners of the business bear that risk. If the business succeeds, the owners benefit.

LANGUAGE OF ECONOMICS

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Ownership: The right to use something and enjoy its benefits.

Profit: The difference between revenues and the costs entailed in producing or selling a good or service; it is a return for risk-taking.

Risk: The chance of losing money. Risk is the opposite of safety.

Stock: A share of ownership in a company. Owners of stock receive part of the company's profits—or bear some of its losses—up to the amount of money they put into the stock.

CROSS CURRICULUM SKILLS

Students develop skills in reading, listening, group participation, and writing.

OBJECTIVES

1. Students explain that a stock is a share of ownership in a business.
2. Students explain that a company's risk is assumed by those who own it.
3. Students explain that owners of stock are entitled to a share of a company's profits.
4. Students describe the risk that a company's owners assume when the business introduces a new product.
5. Students make decisions regarding stock ownership, weighing expected benefits against expected costs.

MATERIALS

◆ Activities 1, 2, and 3*

TIME REQUIRED

One class period

PROCEDURE

A. Explain to students that today they will learn what a stock is and how stock ownership provides limited risks and potential rewards to investors.

B. Ask the students if they know anyone who owns something. (*Everyone owns something—clothes, books, cars, businesses.*) Have students provide examples of ownership they are familiar with. Find out whether any students know people who own businesses.

C. Why do people like to own things? (*Private ownership is a powerful incentive. It allows people to enjoy the benefits of what they own.*)

D. Ask: Can people legally do anything they want with items they own? To prompt discussion, provide a few problematic examples—e.g.,

1. Can you drive on the left side of the road with your car?
2. Can you use your clothes to tie up a student and lock him or her in a locker?
3. Can you use your books to start a fire in someone's living room?

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*Activity 3 is adapted from *The Stock Market Game Guide*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc., and used here with permission.

4. Can you use your makeup to color over the computer monitor screen in school?
   (*The answer is no to each question. Each of these activities is illegal.*)

E. Ask: What does ownership mean?
(*It establishes who gets the benefits associated with the items and who bears the responsibility for what happens with them. You get to drive your car—no one else may without your permission—but you are responsible for driving legally and answering for any harm you cause when you use the car. Ownership means that privileges and responsibilities are clearly defined.*)

F. Distribute Activity 1, *Stock Ownership: A Delicious Topic*, to the class. Ask students to read it individually. Their purpose is to identify the costs and benefits of stock ownership. Ask:

1. How many people own McDonald's?
   (*226,656*)
2. Why would people wish to buy McDonald's stock?
   (*They hope to share in the profits and increase their wealth.*)
3. How do you become an owner of McDonald's?
   (*Buy McDonald's stock.*)
4. What are the benefits of stock ownership?
   (*Owners may share in the profits in the company.*)
5. What are the risks of stock ownership?
   (*Owners may lose some or all the money used to buy stock.*)
6. Will McDonald's accept Toad's suggested menu?
   (*McDonald's is not ready for ants, mosquitoes, or earthworm parts—even if they are dipped in chocolate.*)
7. How do profits help McDonald's?
   (*Profits help by increasing dividends paid to stockholders and expanding the number of restaurants.*)

G. Divide the class into groups of three. Distribute Activity 2, *Happy Birthday, Cookie*. Ask students to use the information in Activity 1 as they answer the questions in Activity 2. Discuss the answers in class.

1. When Nabisco introduced its new cookies in 1912, Nabisco stockholders assumed a risk that was similar to Toad's risk in wanting to sell chocolate insects. What was that risk?
   (*They risked losing money when the company introduced the new cookies. Neither Toad nor Nabisco knew that customers would buy enough of their products.*)
2. Why were stockholders willing to assume this risk?
   (*They thought they could earn a profit.*)
3. Did the risk-taking turn out to be worthwhile for Nabisco's stockholders? Why or why not?
   (*Yes and No. Stockholders have earned profits from the Oreo cookie, but they lost money on the other two cookies.*)
4. Did the risk-taking by Nabisco's stockholders benefit the company's customers and employees? Why or why not?
   (*Customers have benefited by obtaining products they enjoy, and the company's employees have benefited by having a place to work and earn income.*)
5. If you owned stock in the company, would you be entitled to take a package of Oreos from the supermarket whenever you wanted? Why or why not?
   (*No. I would own only a tiny fraction of each cookie, building, or machine belonging to the company.*)

H. ✍ Distribute copies of Activity 3, *Thank-You Note*. Remind the students that every economic choice involves weighing expected costs against expected benefits. For homework, ask students to read the directions and write Aunt Elizabeth a thank-you note that demonstrates that they understand the answers to the questions in Activity 2.

CLOSURE

Review the main points of the lesson:

1. A stock is a fractional share of ownership of a business.

2. Stock owners are entitled to a share of a company's profits.

3. There is risk in owning any company, and stockholders share that risk.

4. Introducing a new product is a risky venture for companies.

ASSESSMENT

Multiple Choice Questions

1. What benefits do you receive from owning a share of a company's stock?
   a. You may vote for members of the board of directors.
   b. You receive a share of profits if the company does well.
   c. You might lose your home or car.
   *d. Answers "a" and "b" are correct.

2. Who decides what products will be produced by a company with many stockholders?
   a. The owners
   *b. The managers
   c. The customers
   d. The employees

ESSAY

✍ Most of us are aware of successful products that companies make—Coke, hamburgers, headlights, and personal computers, for example. But not all ideas succeed in the market. What would happen if a company decided to sell a soft drink that tasted like baking soda? Discuss this question in a short essay.
(*Customers tend to prefer soft drinks that are sweet and thirst-quenching. A baking soda taste would not taste sweet or quench anybody's thirst, so customers would probably choose not to buy it. The company would not make money selling it. Employees would lose their jobs making it. Managers would discontinue production of the beverage and use the resources to produce something different. Owners would share in the loss the company suffered in making the product.*)

LETTER

✎ Think of one company whose shares you would be willing to purchase. Spend a few minutes writing descriptive notes to yourself about two popular products made by that company. Then write a letter to Maria explaining under what conditions stock in this company might be a smart buy.

ACTIVITY 1
STOCK OWNERSHIP: A DELICIOUS TOPIC

Name ______________________________ **Date** ______________________________

Toad is Maria's best friend, but sometimes his impractical schemes are a bit much, even for Maria. Yesterday was a good example. He embarrassed her at McDonald's just because he was ignorant about stock ownership and insects.

Stock ownership and insects? Yes. It all started when Toad stopped by Maria's house and asked her to go to lunch at McDonald's. "Nothing like fries and a burger and something special for lunch," he said, as they walked over to the local Golden Arches.

"Something special?" she asked. But he just ignored her as he hopped along, carrying a carefully folded brown bag.

At the restaurant, Toad offered to buy lunch. He asked Maria to find a table and to guard his brown bag. "Don't look inside, it's a surprise," he said. That should have been enough warning, Toad buying lunch and asking her to guard a brown bag; but she just went along with everything because her brain was temporarily locked in the numb position.

Shortly he joined her at the table with the food and a sour mood. "What is the matter?" she asked. "Didn't they give you good service?"

"Oh, yes," Toad grumped, "but apart from the service she was so uncooperative! I said I wanted to see the owner about this great idea of mine, but she said she was the local *franchise* owner. I said, 'so you own all the McDonald's in the world?' And she said, 'No, it is impossible to talk to those owners.' Then she started waiting on the next customers. She's so rude!" Toad moaned.

"Actually," Maria replied, "she is right. There are 226,656 owners of McDonald's. Maybe you should become an owner."

"That's a great idea," Toad replied. "Then I could have the restaurants serve my favorite foods and I could eat free. If I own the business, then I get to run it my way, right?"

"Not exactly," Maria replied. "I learned a lot about ownership and business by surfing the Internet. If you want to become a part owner of McDonald's, all you have to do is buy stock in that company. You become a part owner of the company, but many other people will also have bought stock in the company. So you are only one of many people who share its ownership. That's why stocks are called shares."

"But I would only eat a tiny share of all the food McDonald's cooks each day," said Toad. "As a part owner, couldn't I eat part of their food?"

"No, you couldn't. McDonald's has close to 694 million shares of stock. That means that the ownership of every hamburger McDonald's produces is really divided into 694 million parts. If you buy one share of stock, then you would own one of 694 million parts of each hamburger."

"That's hard to imagine," said Toad. "That little bit wouldn't fill me up."

"And the same would be true for the company's buildings, stoves, and furniture. You would own only one 1/694 millionth of each thing."

"Well, maybe I could decide what food to put on the menu if I were an owner of McDonald's stock," Toad said. "They are really missing a sure bet by not offering a more varied menu."

"Actually, you can't do that either," Maria replied. "For each share of stock, you get one vote for the company's top managers, or directors. With so many owners or stockholders, you by yourself would not have a big influence on what the company offers as its menu. Actually, managers run the company for you and the other stockholders."

ACTIVITY 1 (CONTINUED)

"So what *would* I get for buying a share of stock in the company?" asked Toad. "It doesn't sound like much of a deal to me."

"Each share of ownership entitles you to some of the profits the company earns," she explained. "But profit is not a sure thing. If people don't like the food, the company wouldn't earn enough money to cover the costs and earn a profit. Any business is risky because the future is uncertain. A company could spend lots of money for buildings, equipment, or developing a new product. But if customers don't like the product or if prices are too high or products of other restaurants are more attractive, business income will be too low. Success is never a sure thing, so there is always a chance of losing your money. Any business is risky and someone has to bear that risk. That's what stockholders do as owners of a business."

"Sounds exciting," said Toad. "So why buy a stock and risk losing money?"

"Because you can make a gain also. You think the business will earn a profit on the product, so you take the risk. The possibility of earning a profit gives the owners and managers of a business an incentive to produce something consumers want to buy at a price they are willing to pay. If the business succeeds, its owners will earn a profit. That is the reward stockholders get for risking their money. Customers also benefit because they get something they like. Employees of the business benefit because they have a place to work and earn income. It's like they're all on one big team with the same goal. But owners are the only ones who risk their own money on whether the goal is accomplished."

"So by buying a stock," Toad said, "I become a business owner who takes part of the risk that the company might fail. But if the company succeeds, I may get some of the company's profit. I'd like to do this, because I know McDonald's could make a profit from my new menu idea. It's tasty, inexpensive to produce, and everyone in my family likes it."

Then Maria asked the fatal question. "Toad," she said, "what is the food you think McDonald's should have on its menu?"

"Look at this great stuff!" Toad shouted as he opened the bag and dumped the contents onto their food plates. "Over at Windy Willows Community Center where all my relatives live, this is our favorite food. Try some. It's got chocolate on it. I know you will like it."

The food was very small—bite-sized—and very tasty. The chocolate taste dominated, but Maria noticed an unusual aftertaste that was not unpleasant. Other people sitting nearby were interested, so Toad also shared it with them. Even the franchise owner came over to see what the fuss was about and tried some. Everything was going great until someone asked, "What is this food?"

On the way home Maria was mad enough to spit. "How could you embarrass me that way? You know most people do not like to eat ants, flies, mosquitoes, and earthworm parts. Now we can never go back to that McDonald's Restaurant! I know for sure McDonald's will never hire you to decide on their food menu. Can you imagine what would happen to their sales if they served your food?"

"I'm sorry," Toad replied. "I just thought that the chocolate flavor would take care of the problem."

Questions for Discussion

1. How many people own McDonald's?
2. Why would people wish to buy McDonald's stock?
3. How do you become an owner of McDonald's?
4. What are the benefits of stock ownership?
5. What are the risks of stock ownership?
6. Will McDonald's accept Toad's suggested menu?
7. How do profits help McDonald's?

ACTIVITY 2
HAPPY BIRTHDAY, COOKIE

Name ______________________________ **Date** ______________________________

Directions: Read the following story and answer the questions that follow:

When April 2 rolls around again, why don't you celebrate the birthday of an old friend? On that day in 1912, the Nabisco company announced "three entirely new varieties of the highest class biscuit packed in a new style." The company described the new cookies—or biscuits, as they were then called—in the following way: The Mother Goose biscuit was "a rich, high class biscuit bearing impressions of the Mother Goose legends; the Veronese biscuit was "a delicious, hard, sweet biscuit of beautiful design and high quality; and, finally, the Oreo was "two beautifully embossed, chocolate-flavored wafers with a rich cream filling."

The Oreo has become a familiar friend to all of us, but the other two "biscuits" were never popular. So Nabisco stopped producing them after a few years. It was not the Mother Goose or the Veronese cookie that rose to fame and is now dunked in milk, crumbled in ice cream, or rolled into hungry mouths.

Because people like Oreos so much, the company sells more than five billion of these little sweeties every year. But where did the unusual name Oreo come from? Maybe it came from the first chairman of the National Biscuit Company, Adolphus Green. He knew that *oreo* is the Greek word for mountain and that in early testing the cookie actually looked like a little mountain. Or perhaps the name came from the French word *or*, which means gold, an important color on the original label.

We don't know where the name came from, but we do know that Nabisco was one smart cookie when it came up with the Oreo. But being top cookie is tough. Who knows what might happen? Consumers could start eating fewer sweets, and the company's production costs could push prices out of reach for many buyers. The business is also very competitive, for there is always another tough cookie ready to take Oreo's place in our hearts and stomachs. But, so far, Oreo hasn't crumbled.

Questions for Discussion

1. When Nabisco introduced its new cookies in 1912, Nabisco stockholders assumed a risk that was similar to Toad's risk in wanting to sell chocolate insects. What was that risk?

2. Why were stockholders willing to assume this risk?

3. Did the risk-taking turn out to be worthwhile for Nabisco's stockholders? Why or why not?

4. Did the risk-taking by Nabisco's stockholders benefit the company's customers and employees? Why or why not?

5. If you owned stock in the company, would you be entitled to take a package of Oreos from the supermarket whenever you wanted? Why or why not?

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ACTIVITY 3
THANK-YOU NOTE

Name ____________________ **Date** ____________________

After talking with Toad, Maria thought more about stocks, profit, and risk. She also thought about the $500.00 her Aunt Elizabeth had given her as a gift for making the school honor roll. She talked to her parents about what to do with the money and then she decided to invest it in stock.

Pretend that you are Maria. Write a letter to your Aunt Elizabeth in the space below and thank her for her gift. Explain that you have decided to use the money to help buy shares of stock in a business. Aunt Elizabeth might be made uneasy by the news of your decision to buy stock. She keeps all her extra money in a savings account. Anticipate Aunt Elizabeth's concerns. Explain why you think you are making good use of the money, even though stock ownership involves risks.

Dear Aunt Liz,

BEST COPY AVAILABLE

LESSON 4
WHAT ARE MARKETS?

INTRODUCTION

This lesson covers the characteristics of markets. The stock market is one market among many, bringing the actions of self-interested buyers and sellers into harmony with the general welfare of the nation. Markets, of course, are the central characteristic of a market economy.

ECONOMICS BACKGROUND

Markets enable buyers and sellers to exchange goods and services. A market may be a *place* where buyers put their money down and carry away whatever it is they have bought—groceries from a supermarket, for example. But a market does not have to be a place. It can be something more abstract. We can speak of "the real-estate market," for example, but it is not possible to go and *look at* the real-estate market; instead, the real-estate market is a complicated set of arrangements involving real-estate sales offices, property listings in newspaper ads and Web pages, for-sale signs on front lawns, even information exchanged by neighbors talking over back fences. All these arrangements help people who want to sell houses. All these arrangements, in other words, create the real-estate market.

It is the same with stock markets. Some stock markets, such as the New York Stock Exchange or the American Stock Exchange, do have a physical location that people can see and visit. Other stock markets, such as the Nasdaq Stock Market, use computers to bring buyers and sellers together. These markets, like the real-estate market, depend on all sorts of advertisements, newspaper and computer listings, and personal relationships that enable buyers and sellers to get together.

Markets of this sort accomplish something very important. They *allocate* scarce resources. The allocation occurs as a result of buyers making offers to buy and sellers deciding whether to accept the offers. When each one thinks that the proposed deal looks like a good deal, the sale is made; the homes or the stock shares in question are allocated among all the people who might possibly want them.

Allocation could be handled in other ways. For example, it could be handled by a central governing authority. A government could declare that it owned all the resources in question and that it would distribute the resources for people to use, according to some system of priorities determined by a government agency. In allocation systems of this sort, the economy is called a *command economy*.

Market economies differ from command economies in several important ways. First, market economies depend upon private ownership of property. In market transactions, people sell things that are their property until ownership is transferred when someone else buys them. Second, market economies allow people to pursue their own self-interest. Parties engage in market transactions voluntarily; each one believes he or she will benefit. Third, market economies foster competition. Buyers won't buy unless the seller offers a deal that looks acceptable, so sellers must make an effort to provide good prices and quality. Fourth, market economies depend upon a rule of law provided by government. The government protects private ownership of property, provides for legal enforcement of contracts, and protects people against fraud and coercion, thus enabling them to participate freely in market activity. Fifth, market economies work efficiently and peacefully, provided that the rule of law in which they exist really is adequate to protect people from illegal practices. People making their own decisions in an open market get only what they bargain for, and sellers in an open market have no reason to produce things that buyers don't want to buy.

LANGUAGE OF ECONOMICS

Competition: The rival efforts of two or more people or businesses acting independently to get the business of others by offering a better price or a higher level of quality in goods or services.

Demand: The different quantities of a resource, good, or service that will be purchased at various possible prices during a specific time period.

Market: The process through which buyers and sellers exchange with each other.

Market-Clearing Price: The price at which the quantity of a good or service demanded by consumers and the quantity supplied by producers are equal. This is also called the equilibrium price.

Market Economy: A system of decentralized decision making in which individuals and business firms, in their various capacities as consumers, producers, workers, savers, and investors, participate in the market through decisions that are reflected in the supply of and demand for various goods, services, and resources.

Profit: The difference between revenues and the costs entailed in producing or selling a good or service; it is a return for risk-taking.

Resources: The land, labor, capital, and entrepreneurship required to produce goods and services that people want.

Supply: The different quantities of a resource, good, or service that will be offered for sale at various prices during a specific time period.

Voluntary Exchange: A trade or transaction between a willing buyer and a willing seller.

CROSS CURRICULUM SKILLS

Students develop skills in reading, listening, speaking, and writing.

OBJECTIVES

1. Students identify the characteristics of a market.
2. Students identify the characteristics of a market system.
3. Students illustrate how markets channel self-interested behavior into social cooperation.
4. Students analyze how markets work.

MATERIALS REQUIRED

- Visual 1
- Activity 1

TIME REQUIRED

One class period

PROCEDURE

A. Ask the students what markets they have participated in during the past week. Write their answers on the board, and tell them you will return to their answers later.

B. Tell the students that the stock market is just one of many, many markets in the United States. In this lesson, they will learn the characteristics of markets and how market prices act as an invisible hand to bring personal self-interest and the general welfare into harmony.

C. Give each student a copy of Activity 1, *Shopping with Spiders*. Ask them to read Activity 1 and answer the questions at the end. Discuss the answers:

1. For whom is Julie looking out when she shops for boots? (*Herself.*)
2. Why are stores willing to sell boots to Julie? (*They also are interested in themselves; they want to make a profit.*)
3. How does Julie benefit from her ability to buy boots from many manufacturers and from dozens of stores and catalogs? (*Julie can get more choices and lower prices.*)
4. Why do catalogs exist? Why do companies put pages on the World Wide Web? (*To sell goods and make profits. It is in their self-interest to do this.*)
5. How does the boot manufacturer benefit from the market economy? (*The market signals the manufacturer what to make. If the manufacturer makes a boot that doesn't sell, it will quickly find this out.*)
6. How do we know that both Julie and the store will benefit when she buys boots? (*Julie is a willing buyer and the store is a willing seller. No one is forcing them to make the deal. If both of them do not feel they will benefit, they will not make the transaction. Nonetheless, there is a risk involved. Julie could hate the boots when she gets home. Both sellers and buyers weigh expected benefits against expected costs.*)
7. Does a market require people to meet personally? (*No. Markets exist wherever buyers*

and sellers interact. Markets can exist by mail, phone, or computer.)

8. What markets have you participated in this week? (*Begin by looking at the markets listed on the chalkboard. Then ask the students if they can add more.*)

D. Now tell the students that you are developing a market for push-ups. Ask if anyone would voluntarily do 30 push-ups for you.

E. The students will probably refuse. What's in it for them?

F. Tell them that you are willing to buy push-ups. Ask how many are willing to do 30 push-ups for one extra-credit point. (*Extra-credit points are the money supply of this economy. Have willing students do the push-ups, and record the extra credit.*)

G. Keep raising the number of extra-credit points you are willing to pay for 30 push-ups. If the students complain that they can't do them, tell them that it's their problem, not yours.

H. You may now want to let the students who have done the push-ups for one point also do them for more points. It's your call. You are buying. Make it clear they are providing a service. They are free to do push-ups or not to do push-ups. You are free to buy or not to buy push-ups.

I. Create a chart showing how many push-ups were done for one extra-credit point, for two extra-credit points, and so on.

J. Now debrief the simulation by asking the following questions:

1. Was this a market? (*Yes. Push-ups were bought and sold.*)
2. Why were students willing to do push-ups? (*They were paid—in extra-credit points rather than in money.*)
3. Were the students producers or consumers? (*They were producers; you were the consumer.*)
4. How did you get enough students to do push-ups? (*You paid more extra-credit points.*)
5. Was this a voluntary transaction? (*Yes.*)
6. Was there competition? If so, whom did the competition help? (*Yes. The competition between the producers of push-ups helped the consumer, the teacher. It probably lowered the price. If only a few students were willing to do push-ups, they might have colluded and agreed to do push-ups only for a higher price.*)
7. How did the extra-credit points influence the number of push-ups performed? (*More were performed as the number of extra-credit points increased.*)

K. Display Visual 1, *Features of a Market Economy*, and discuss the characteristics of a market economy. Make the transition from an individual market to a market system, which consists of billions of individual market transactions. Here are some discussion points for each idea on Visual 1:

1. **Private Property**
   People use resources more wisely when they own the property. Private ownership creates incentives for maintaining that property and using it productively. The owner is rewarded if the property is improved. Private ownership creates incentives to use the property productively because productive use increases the owner's income. Finally, private ownership creates incentives to conserve the property for the future. If the property increases in value, the owner benefits.

2. **Self-Interested Behavior**
   A market economy is based on self-interested behavior. Adam Smith wrote in *The Wealth of Nations* that although an individual considers only his own advantage, his actions in a market economy are "led by an invisible hand to promote an end that was not part of his intention." Market prices guide this invisible hand. People acting in their own interest respond to relative price changes. This encourages producers to find least-cost meth-

ods of production and consumers to use their incomes to maximize their satisfaction.

3. **Consumer Sovereignty**
   In a market economy, consumers direct the allocation of resources by making choices about how to spend and save their income.

4. **The Profit Motive**
   Profits are an incentive for producers to respond to consumer choices. Businesses that please the consumer and control costs increase their profits. Resources are directed toward profitable businesses and away from businesses that have losses. Therefore, profits move resources toward activities that increase wealth.

5. **Competition**
   Competition puts pressure on businesses to satisfy the preferences of consumers and to produce efficiently. Businesses that cannot beat their competition have losses and eventually go out of business. While business failures are tough for businesses, they are actually good for the overall economy because any economy needs to use its scarce resources efficiently.

6. **Voluntary Exchange**
   Voluntary exchange benefits both buyers and sellers. Otherwise, the trade would not take place. Voluntary exchange allows people to concentrate on what they do best. They can then trade the surplus production to obtain other valuable goods and services. Because markets encourage trade, markets create wealth.

7. **Limited Role for Government**
   Government has a different function in a market economy than in a command economy. In a command economy, government produces or directs the production of goods and services. The collapse of communism illustrated that this method does not work very well. In a market economy, government protects the rights of citizens, including private property rights, and enforces contracts, making sure agreements are honored.

CLOSURE

Aliens from Jupiter land in a field behind your house. The spaceship is filled with an exploratory team of economists. They ask you, "How are goods and services produced, distributed, and consumed on your planet?" You tell them that your country has a market economy. People are free to produce, consume, and trade what they want. The chief Jupiter economist says this must be nonsense. How can such a chaotic system work? What if people won't do some jobs? What if too little is produced? What if too much is produced? What if producers produce shoddy goods? How do you answer this alien?

ASSESSMENT

Multiple Choice Questions

1. Sue sells 12 cookies to Will for $2.00. We can assume that
   a. Will paid too much.
   *b. both Sue and Will expected to benefit.
   c. the sale could not take place without government rules.
   d. Sue made a large profit at Will's expense.

2. A market **must** have
   a. some land on which the market is located.
   b. people meeting each other face to face.
   *c. buyers and sellers.
   d. all of the above.

ESSAY

✍ List and explain three features of a market economy. (*Students may use any three of the features discussed in this lesson.*)

✍ What is the role of profits in a market economy? (*Profits provide the incentive for firms to use resources efficiently and produce goods and services that people are willing to buy.*)

JOURNAL

✍ Describe three markets that you or your family participated in during the past week. For example, if you worked for pay, you participated in a labor market. If you bought or sold stock, you participated in a stock market. If you bought a CD, you participated in a market for goods and services. For each of your examples, be specific about your role or your family's role in that market.

VISUAL 1
FEATURES OF A MARKET ECONOMY

1. Private Property

2. Self-Interested Behavior

3. Consumer Sovereignty

4. The Profit Motive

5. Competition

6. Voluntary Exchange

7. Limited Role for Government

ACTIVITY 1
SHOPPING WITH SPIDERS

Name ______________________________ **Date** ______________________________

Julie wanted to buy a new pair of boots. A major blizzard made it clear that her old boots, although still stylish, leaked badly.

As soon as the roads were passable, Julie could go to the mall, which has several shoe stores. Julie could visit these stores, compare the quality and prices of their boots, and make her choice.

Or she could shop at the off-price mall down the road. It has fewer stores, but the prices are good. She found some nice shoes there last month.

Or she could shop from a catalog without having to leave the house. Each mail delivery recently has brought another six catalogs, but Julie has her favorites. She could look through the catalogs, make her choice, and order by mail or phone. Buying a pair of boots can be as easy as dialing an 800 number and paying by credit card. However, Julie really likes to try on shoes and boots before buying, and she cannot do that by catalog.

Julie's friend Holly told her that she is thinking about shopping in cyberspace over the World Wide Web. Holly uses a computer at college to log onto the World Wide Web. She uses a "Web browser" called the Navigator. At first, she had a hard time surfing the Web, but then she found a spider. A spider captures and indexes documents on the Web. The best spiders capture and index a million documents a day. Holly uses a spider called Yahoo. She told Julie that she could type in "shoes" and "boots" and find Web pages from manufacturers and stores from all over the world.

Holly told Julie that she doesn't actually buy things over the Web because she is afraid people could find and use her credit card number. Instead, she calls the companies she is interested in, gets more information, and then makes her purchase. Someday, however, most shopping could be done by people using spiders on the Internet. But it still would be fun to go to the mall.

Questions for Discussion

1. For whom is Julie looking out when she shops for boots?
2. Why are stores willing to sell boots to Julie?
3. How does Julie benefit from her ability to buy boots from many manufacturers and from dozens of stores and catalogs?
4. Why do catalogs exist? Why do companies put pages on the World Wide Web?
5. How does the boot manufacturer benefit from the market economy?
6. How do we know that both Julie and the store will benefit when she buys boots?
7. Does a market require people to meet personally?
8. What markets have you participated in this week?

LESSON 5
SHOWTIME ON WALL STREET

INTRODUCTION

In this lesson, students learn more about what a stock market is and how it functions in the economy. Students simulate stock trading through role-playing.

ECONOMICS BACKGROUND

Stock markets, like other markets, enable buyers and sellers to exchange goods and services. Voluntary trade benefits the buyer and seller. By providing a place for buyers and sellers to find each other, markets reduce the costs of trade. Stock markets enable businesses to raise the money they need to get started and to expand. Thus, stock markets foster economic growth.

LANGUAGE OF ECONOMICS

AMEX: The American Stock Exchange, which is one of the organized stock markets in New York City.

Asked (or Offer) Price: The price that sellers are willing to accept for a particular stock at a given time.

At the Market: An order to buy and sell a stock at the best price currently available.

Auction Market: The type of market found in organized stock exchanges. As in an auction, stocks are sold to the person willing to pay the highest price and purchased from the person willing to sell for the lowest price.

Benefits of Trade: The advantages obtained by buyers and sellers when they trade a stock.

Bid Price: The price that buyers are willing to pay for a particular stock at a given time.

Broker: An individual or business that specializes in bringing together buyers and sellers of stocks.

Clerk: A member of a brokerage house who transfers orders and information between stockbrokers in an office and floor brokers at a stock exchange.

Commission: The fee a broker and/or stockbroker collects for helping people buy and sell a stock.

Costs of Trade: The time and money buyers and sellers spend to find one another and arrange trades.

Customer: A person who buys the product or service offered by a business.

Floor Broker: A member of a brokerage house who completes a customer's buy or sell order on the floor of a stock exchange.

Investment Banker: A business that gives a corporation advice on how to raise money and also sells new issues of stocks and bonds.

Limit Order: An order to buy or sell a stock at a certain (or better) price. A buyer's limit order for $20 would be completed only if each share can be bought for $20 or less.

Listed Stock: Stocks that have been approved and listed for trading by one of the organized stock exchanges or markets. These stocks must meet specific financial and other requirements to qualify. Unlisted stocks are those that trade over the counter and do not need to meet certain standards.

Market: The process through which buyers and sellers exchange with one another.

Market-Maker: A stock trader who agrees to buy and sell, or "make a market" in a company's stock. The trader uses his or her firm's money to purchase stock so he or she has shares available for people to buy. A market-maker also must agree to purchase stock back when investors want to sell. Market-makers buy and sell Nasdaq and OTC stocks. Smaller companies usually have only a few market-makers while large companies have dozens.

Nasdaq: The Nasdaq Stock Market is an electronic marketplace where buyers and sellers get together via computer and hundreds of thousands of miles of high-speed data lines. More than 5,000 companies list on Nasdaq's computerized market. Nasdaq is not an *exchange* because it doesn't have a central floor.

New-Issues Market: A market in which a corporation sells new stock to raise money for start-up or expansion. This market is often called the primary stock market.

NYSE: The New York Stock Exchange, which is one of the organized stock markets in New York City.

Over-the-Counter Market (OTC): The over-the-counter market lacks the central trading floors of the stock exchanges. Like Nasdaq, brokers and dealers trade with one another by using computers and telephones, but unlike Nasdaq, OTC stocks do not have to meet listing standards. OTC stocks are usually small, and not frequently traded.

Pink Sheet Market: Another name for the OTC market. The "pink sheets" are lists of OTC stocks, and the prices at which dealers are offering to buy and sell them. These lists are printed on pink paper and distributed early every morning to the trading community.

Price (of a stock): An amount agreed on between a buyer and a seller to exchange a stock certificate.

Primary Markets: Those markets in which stocks are offered for sale the first time.

Quotes: The highest price bid by a buyer and the lowest price asked by a seller for a stock at a given time. Quotes are usually expressed in dollars and fractions of a dollar. For example, at one time a share of Apple Computer was quoted at 27 3/4, which meant $27.75.

Secondary Markets: Those markets in which stocks can be bought and sold once they are approved for public sale.

Specialist: A broker on an exchange who trades in certain stocks at a specific location (post) on the trading floor. Each specialist has an assigned post where all trading of particular stocks occurs. Specialists quote the current prices of stocks traded at their posts and they complete limit orders.

Stockbroker: A broker who accepts orders to buy and sell stock and then transfers those orders to other people who complete them.

Stock Exchange: One of the organized stock markets with a centralized trading floor. In this market, auction-type trading allows traders to sell stocks to the highest bidder or buy stocks from the lowest supplier. These markets consist of the New York Stock Exchange and the American Stock Exchange, both of which are located in New York City. Also included are the regional stock exchanges found outside of New York City. These are the Boston, Cincinnati, Intermountain (Salt Lake City), Midwest (Chicago), Pacific (Los Angeles and San Francisco), Philadelphia (Philadelphia and Miami), and Spokane stock exchanges.

Stock Market: A market in which the public trades stocks that someone already owns. This market allows people to buy and sell stocks quickly and easily. Examples are the New York Stock Exchange and the American Stock Exchange. This market is often called the secondary stock market.

CROSS CURRICULUM SKILLS

Students develop skills in speaking, reading, and listening.

OBJECTIVES

1. Students explain why markets are necessary for trading stocks and how markets operate.
2. Students distinguish between primary and secondary markets
3. Students identify the American Stock Exchange, the New York Stock Exchange, and the Nasdaq Stock Market.
4. Students describe the sequence of a stock trade on the New York Stock Exchange.
5. Students explain that a buyer and seller trade a stock because they both expect to benefit.
6. Students describe the benefits received by buyers and sellers when they trade a stock.
7. Students explain how brokers help make stock trades possible.

MATERIALS

- Visual 1
- Activities 1*, 2*, and 3*
- Other: Small sign labeled McDonald's (MCD) Trading Post
- Large sign labeled New York Stock Exchange

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*These activities are adapted from *The Stock Market Game Guide*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc., and used here with permission.

- ◆ Props (may be imaginary): two telephones, two newspapers, two computers, and two order machines

TIME REQUIRED

Two class periods

PROCEDURE

A. Ask students where they go when they want to buy something. What do they buy, and where do they go to buy it? Accept several answers, writing them on the board, until a pattern is evident.
(*Examples: Tapes and CDs are bought in a music or department store. Jeans are bought in a jeans store, books in a bookstore, and so on.*)

B. Explain that in this lesson the students will learn where they "go" when they want to buy stocks, and they will learn how stocks are traded. Like the market for CDs, jeans, and books, there are markets for stocks.

C. Ask: Can you buy stocks at the mall? Ever see a stock store? Do you have to "go" anywhere to buy stock? Explain that stock trades—buying and selling—are handled through a broker. Buyers need to contact a broker by phone, letter, e-mail, or a visit. But, before we look at how that is done, let's understand the types of markets and why we need them.

D. Display Visual 1, *The Market for Stocks*. Explain the difference between primary and secondary stock markets. Primary markets sell "new" stock—stock issued by companies for the first time. Secondary markets sell "used" stock—stock previously owned by an investor. New companies or companies that want to expand offer new stock shares and sell them in the primary markets to raise money. These new shares are sold to investment bankers (who first determine that the stock has value); investment bankers in turn offer the shares for sale to the public. Ask: What is the primary market for CDs or Levis jeans? (*Music stores, clothing shops*)

E. Ask students how stocks differ from CDs, jeans, and books. When they buy one of those items, do they expect to use them and then resell them? Could they return a used pair of jeans or a read, perhaps underlined, book to the store where it was purchased? Probably not. But when you buy a stock, you do expect that at some time in the future—not now, perhaps not even soon, but eventually—you will want to sell it. Will the company buy it back? No. So, what do you have to do? You need to find a buyer for your specific stock. To find one, you look in the secondary market. Use Visual 1 to discuss the secondary market. After a stock's initial sale, all subsequent transactions take place in the secondary markets. This is the marketplace where listed stocks—those that have been approved by the exchange for transaction—can be bought and sold.

F. Give an example of a secondary market with which the students might be familiar. Sometimes students shop at resale shops for hip and trendy clothes that others have discarded. School books are often resold to a bookstore which then resells them to others. Why don't students just resell their books to the students who want to buy them, eliminating the middleman? That sounds like a good idea, but how would the seller find the new buyer? How much time would it take? Would the effort be worthwhile? Explain that in addition to providing a procedure for trade, a market also provides information, so that buyers and sellers can find each other. This reduces the costs of trade—the time and money buyers and sellers spend to find one another and arrange trades.

G. Distribute Activity 1, *A Walk on Wall Street*, and read it with the class. Ask students to complete the market identification exercise. Answer and discuss the questions.

Part 1

1. SE   2. OTC   3. SE   4. NI
5. NI   6. OTC   7. NI

Part 2

Think about what you have read and answer the following questions.

1. Why is the primary market for stocks important to our economy?
(*It allows corporations to raise money to get started or to expand. These businesses can then create jobs and provide consumers or other businesses with more goods and services.*)

2. Why is the secondary market of stocks important to our economy?
(*The market offers buyers and sellers liquidity, the ability to buy and sell their stocks quickly. This encourages buyers to buy new issues of stock in the first place because they know they can sell it to someone else when they decide to sell.*)

3. Why is the secondary market of stocks important to buyers and sellers—individual investors?
(*It reduces the costs of trade—the time and money buyers and sellers spend to find one another and arrange trades.*)

4. How is a stock exchange different from the over-the-counter market?
(*The stock exchanges are actual places where stock is traded through an auction market. Both the Nasdaq market and the OTC markets work by connecting buyers and sellers with computers and telephones, but Nasdaq is an organized market that companies must be qualified to list on. The OTC market usually deals in stock of small companies.*)

H. ✍ Distribute Activity 2, *Showtime on Wall Street*, and assign students to the following 10 roles:
   - moderator
   - buyer
   - seller
   - buyer's stockbroker
   - seller's stockbroker
   - buyer's clerk
   - seller's clerk
   - buyer's floor broker
   - seller's floor broker
   - specialist

I. Alert the students to the Terms of Trade vocabulary listed at the beginning of Activity 2. Provide, as props, two telephones, two newspapers, a small sign labeled McDonald's (MCD) Trading Post, and a large sign labeled NYSE. Participating students should wear signs, such as Stockbroker and Clerk to indicate their roles and allow other students to follow the activities. Also inform students of the imaginary machines they will be using.

J. Have students act out the play in front of the class. Tell students who are watching the play to think about how the trading of McDonald's stock takes place.

K. Perform the play a second time with other students. Eventually, have students role play trading without a script.

L. Distribute Activity 3, *Trading Stocks on Wall Street*, to the class. Ask the students, working in groups or individually, to complete this activity.

Answers to Activity 3, *Trading Stocks on Wall Street:*
Part 1:
a.4 b.6 c.8 d.1 e.5 f.2 g.7 h.3
Part 2:
1.d 2.b 3.c 4.a

CLOSURE

Would you buy a used stock from your broker? (*Sure, that is the only kind brokers sell.*)

Markets provide information to buyers and sellers, enabling each to find the other and do the deal. Why would buying or selling a stock be difficult without a broker? (*Buyers and sellers of stock live all over the world. A buyer is not likely to know who the possible stock sellers are or where they live. A seller is not likely to know who the possible stock buyers are or where they live. Without a broker who specializes in finding buyers and sellers, people would spend a lot of time and money trying to find one another and arranging trades. Buyers and sellers can benefit more when trading stock with one another by reducing the costs of trade.*)

Ask students to summarize the role markets play in an economy. (*In addition to facilitating trade between buyers and sellers, they provide a market that enables corporations to raise money for start-up costs or for expansion. This encourages economic growth.*)

ASSESSMENT

Multiple Choice Questions

1. Secondary markets include all the following, except
   a. New York Stock Exchange.
   b. American Stock Exchange.
   *c. New Issues.
   d. the Nasdaq Stock Market.

2. A trade on the NYSE requires
   *a. a stockbroker to receive customer orders and communicate buy/sell orders to the company's clerk on the floor of the stock exchange.
   b. an electronic market.
   c. a specialist who offers to buy/sell stock at the proper posts on trading floor.
   d. the customer calling the NYSE and placing the order.

3. All the following are involved in trading on the New York Stock Exchange, except
   a. stockbroker.
   *b. market maker.
   c. specialist.
   d. floor broker.
   e. clerk at stock exchange.

ESSAY

✍ Explain how stock market activity helps our economy. Include both individuals and businesses in your answer.
(Selling stocks in the primary markets allows businesses to begin or expand. This provides jobs and encourages economic growth. Sales in the secondary market ensure that buyers will be able to trade their stock. The market provides a place for buyers and sellers to find each other and reduces the cost of trade.)

✍ What do used book stores, resale shops for clothes, and the New York Stock Exchange have in common? Explain.
(All of them provide a market in which buyers and sellers of used products may find each other and make a trade. The markets reduce the costs of trade.)

JOURNAL

✍ Record in your journal any headlines in the newspaper with the word "market" in them. What is the market referred to by the writer? What is the market doing? Is it a primary or secondary market?

VISUAL 1
THE MARKET FOR STOCKS

NEW-ISSUES MARKET—PRIMARY MARKET
Stocks are offered for sale for the first time.

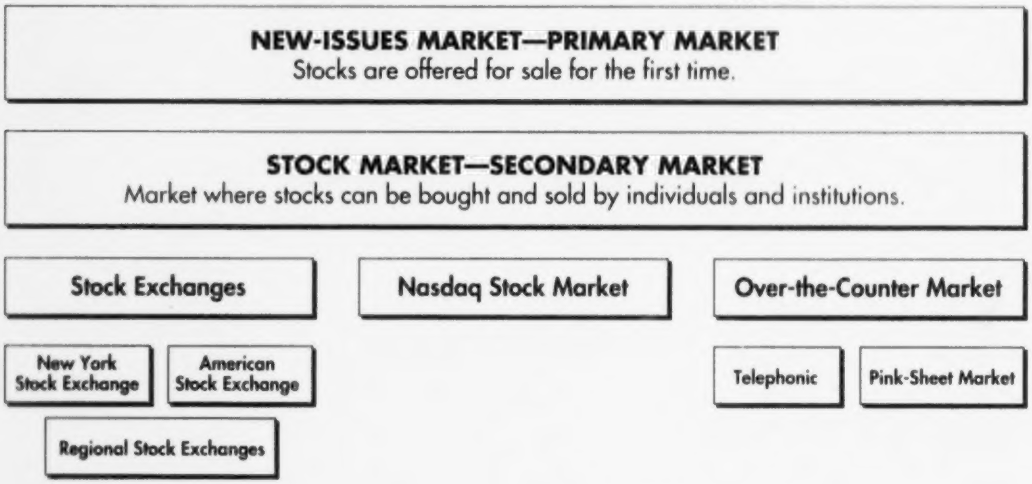
STOCK MARKET—SECONDARY MARKET
Market where stocks can be bought and sold by individuals and institutions.

- **Stock Exchanges**
  - **New York Stock Exchange**
  - **American Stock Exchange**
  - **Regional Stock Exchanges**
- **Nasdaq Stock Market**
- **Over-the-Counter Market**
  - **Telephonic**
  - **Pink-Sheet Market**

ACTIVITY 1
A WALK ON WALL STREET

Name ______________________ **Date** ______________________

"Today on Wall Street, the market ..." announces the financial reporter. Like most other people, the reporter is using the term "Wall Street," an actual street name in New York City, to refer to the market for stocks. The diagram below shows how the stock markets are organized.



NEW-ISSUES MARKET—PRIMARY MARKET
Stocks are offered for sale for the first time.

STOCK MARKET—SECONDARY MARKET
Market where stocks can be bought and sold by individuals and institutions.

Stock Exchanges
- New York Stock Exchange
- American Stock Exchange
- Regional Stock Exchanges

Nasdaq Stock Market

Over-the-Counter Market
- Telephonic
- Pink-Sheet Market

The two boxes at the top of the diagram show there are actually two different markets for stocks. The first is the new-issues market or the primary market. In this market, new or growing businesses sell stocks to raise money. These stocks are called new issues because they are brand-new stocks that a company is selling for the first time. When a new or expanding company decides to offer new shares of stock to raise capital, the company normally will solicit the services of investment bankers, who, after determining that the stock is worthwhile, will buy a large block of stock and offer it for sale to the public. The new-issues market is very important. It allows corporations to raise money to get started or to grow. These businesses can then create jobs and provide us with more goods and services. This economic growth is good for our economy.

Buyers of new shares of stock can later sell them in the stock market, also known as the secondary market. In the stock market, people and groups use brokers to trade stocks they already own, just as automobiles can be traded in the used-car market. This reduces the costs of trade—the time and money buyers and sellers would need to spend to find one another to arrange trades. When stockholders trade stocks in the stock market, the companies that first issued those stocks don't receive any additional money. But the stock market is very important to these companies because it allows people to sell their stocks quickly and easily. If stockholders could not sell their stocks whenever they wanted to, many of them would not buy the companies' stock in the first place. Then, corporations would have trouble selling new issues of stock when they wanted to start up or expand.

Sometimes the stockholders of a company sell their stock to the public. This is called a secondary offering. In this case, the stockholders, not the company, receive the money.

The lower part of the diagram shows that the stock market is made up of stock exchanges, the Nasdaq market, and the **over-the-counter (OTC)** market. In 1992, there were over *50 mil-*

ACTIVITY 1 (CONTINUED)

lion people who bought stock. Brokers for all of these people cannot get together in one place to trade stocks. Instead, many of them buy and sell stocks through a stock exchange, or Nasdaq's computerized market. A stock exchange is a marketplace where brokers called "floor brokers" buy and sell stocks for their customers and for other brokers. On Nasdaq, market-makers, working from securities firms all over th country, buy and sell stocks for their customers and other brokers, via computers all linked together.

Thus, a stock exchange is simply a marketplace where listed stocks, those that have been approved by the exchange for transaction, can be bought and sold. Through the exchanges, representatives of buyers and sellers can meet to trade on behalf of their customers. These exchanges function as auction markets. Prices are determined by an open auction market in which the buyer's bid price—what buyers are willing to pay for a particular stock at a particular time—and the seller's asked (or offer) price—what sellers are willing to accept for a particular stock at a given time—must come together. When these representatives, members of a particular exchange such as NYSE or AMEX, agree on a price, a transaction is made.

There are nine stock exchanges in the United States. The biggest is the New York Stock Exchange, located in New York City. Brokers buy and sell stock in about 2,570 different companies at the NYSE. In order for a company to have its stock traded here, it must make over $2.5 million a year and have sold over 1.1 million shares of stock. The companies pay anywhere from $11,000 to $60,000 a year to have their stock traded. The American Stock Exchange (AMEX) is located just a few blocks away from the NYSE. Here floor brokers buy and sell stocks in over 840 companies. In order for a company to have its stock traded on the AMEX, it must make over $750,000 each year and pay a yearly fee of $3,000 to $12,000.

You can buy stock in over 30,000 other companies that are not traded on the NYSE or AMEX. How? One way is through regional stock exchanges located in cities such as Philadelphia, Boston, and Chicago. Another way is on The Nasdaq Stock Market, based in Washington, DC, and America's second largest market. More than 5,400 companies list on the Nasdaq market. To list on the Nasdaq, a company must have at least four million dollars in assets, and have half a million shares of stock in public hands. To list on the electronic market companies pay a yearly fee of $5,000 to $20,000.

Another way stocks are traded is over-the-counter, or OTC. OTC stocks are any that do not list on an exchange or market. They are often small companies without lots of shareholders. Many large international companies trade their stock over-the-counter in the United States because being unlisted saves them a tremendous amount of paper work. Any company can trade over the counter if it finds a market-maker at a securities firm willing to buy and sell its stock. The market-maker will advertise his or her prices in the "pink sheets" or on a computerized system call the "Over-the-Counter Bulletin Board," or OTCBB. These prices are *indications* of what the market-maker will buy and sell the stock for, and they are often negotiable, particularly if someone is buying a larger amount of stock. (Just as at a supermarket you often get a better price when you buy the larger size.) These market-makers, or dealers, trade among themselves and the public, both for their own accounts and for their customers.

Finally, the pink-sheet market is also part of the OTC market. In this market, trades occur for stocks that are not part of Nasdaq or the regular OTC market. Prices of these stocks are printed in a daily "pink sheet" sent to brokers' offices.

ACTIVITY 1 (CONTINUED)

Part 1: Market Identification

Directions: Read each statement below and decide if it describes something that would happen in the new-issues market, on the stock exchanges, on the Nasdaq market, or in the over-the-counter market. Write NI for new issues, SE for stock exchanges, NM for the Nasdaq market, and OTC for over-the-counter.

_______ 1. A stockholder calls her broker and asks to sell 100 shares of a stock she owns that is listed on the AMEX.

_______ 2. A dealer is on the telephone trying to get the best possible price for a customer who wants to sell 100 shares of stock.

_______ 3. The price of the stock changes often as representatives of buyers and sellers meet to trade in an auction market.

_______ 4. Several investment bankers buy the new stock from the company and then sell shares to their customers.

_______ 5. A corporation wants to raise $500,000 to buy new equipment and decides to sell 50,000 shares of stock. The corporation must provide a prospectus which contains important facts about the corporation.

_______ 6. Securities firms, called market-makers, trade in an electronic market.

_______ 7. The price of the stock is set at a given amount and does not change until all of the stock is sold.

Part 2

Think about what you have read and answer the following questions.

1. Why is the primary market of stocks important to our economy?
2. Why is the secondary market of stocks important to our economy?
3. Why is the secondary market of stocks important to buyers and sellers—individual investors?
4. How is a stock exchange different from the Nasdaq stock market?

ACTIVITY 2
SHOWTIME ON WALL STREET

Name ______________________ **Date** ______________________

Terms of Trade:

Asked (or Offer) Price: The price that sellers are willing to accept for a particular stock at a given time.

At the Market: An order to buy and sell a stock at the best price currently available.

Benefits of Trade: The advantages obtained by buyers and sellers when they trade a stock.

Bid Price: The price that buyers are willing to pay for a particular stock at a given time.

Broker: An individual or business that specializes in bringing together buyers and sellers of stocks.

Clerk: A member of a brokerage house who transfers orders and information between stockbrokers in an office and floor brokers at a stock exchange.

Commission: The fee a broker and/or stockbroker collects for helping people buy and sell a stock.

Costs of Trade: The time and money buyers and sellers spend to find one another and arrange trades.

Floor Broker: A member of a brokerage house who completes a customer's buy or sell order on the floor on a stock exchange.

Limit Order: An order to buy or sell a stock at a certain (or better) price. A buyer's limit order for $20 would be completed only if each share can be bought for $20 or less.

Quotes: The highest price bid by a buyer and the lowest price asked by a seller for a stock at a given time. Quotes are usually expressed in dollars and fractions of a dollar. For example, at one time a share of Apple Computer was quoted at 27¾, which meant $27.75.

Specialist: A broker on an exchange who trades in certain stocks at a specific location (post) on the trading floor. Each specialist has an assigned post where all trading of particular stocks occurs. Specialists quote the current prices of stocks traded at their posts and they complete limit orders.

Stockbroker: A broker who accepts orders to buy and sell stock and then transfers those orders to other people who complete them.

The Cast

In the front of classroom: Moderator. On one side: Buyer and Buyer's Stockbroker (in corner), Seller and Seller's Stockbroker (in other corner).

On other side of classroom (sign labeled NYSE is on this side of the room): Buyer's Clerk and Seller's Clerk (in one corner), Specialist and a few students to play the silent roles of other floor brokers near the specialist's post (in other corner near the sign labeled McDonald's [MCD] Trading Post), Buyer's Floor broker and Seller's Floor broker between clerks and specialist.

Real or Imaginary Props:

Two newspapers; two telephones; two computers; an order machine. (Note: The students using the imaginary order machine and computers should be informed in advance.)

ACTIVITY 2 (CONTINUED)

The Play

MODERATOR: In order to understand how the stock market works, let's begin by visiting a buyer of a stock whose shares are listed on the New York Stock Exchange.

BUYER: [*reading the stock pages of a newspaper*] I've wanted to buy stock in McDonald's, the fast-food company, for a long time. I think I'll call my stockbroker and find out what the stock is selling for right now.
[*dials number on telephone*] Hello, Stockbroker? Would you please tell me what is the price of McDonald's?

BUYER'S STOCKBROKER: [*answering the telephone*] Certainly, Buyer. Let me check for you [*looks at a computer*]. The last sale of McDonald's was forty and an eighth.

BUYER: That's a great buy. I expect the price to rise and the company to pay big dividends in the future. I'd like to order 100 shares.

BUYER'S Stockbroker: Okay, I'll get on it right away. But first, tell me if you want to buy at the market or if you want me to enter a limit order for you.

MODERATOR: An order to buy or sell at the market tells the broker to take the best price being offered on the trading floor of the New York Stock Exchange. A limit order tells the broker to buy or sell at a given or better price.

BUYER: Buy it at the market.

BUYER'S STOCKBROKER: I should be able to confirm the purchase right away. I'll call you back in a few minutes.

MODERATOR: Before we follow the buyer's order to the stock exchange, let's watch as someone places an order to sell shares of McDonald's.

SELLER: [*reading the stock pages of a newspaper*] I've been thinking about selling some of my shares of McDonald's stock. I think I'll call my stockbroker [*dials number on telephone*]. Hello, Stockbroker? What's McDonald's stock selling for right now?

SELLER'S STOCKBROKER: [*answering the telephone*] Let me see [*looks at a computer*]. The last sale in MCD was forty and an eighth.

SELLER: I should sell at that price. I bet if I keep the stock its price will fall and the company will pay lower dividends in the future. Please sell 100 shares for me.

SELLER'S STOCKBROKER: I can do that right away. But do you want to sell at the market or do you want me to enter a limit order for you?

SELLER: Sell my shares at the market.

SELLER'S STOCKBROKER: I'll do that now and call you back in a few minutes.

ACTIVITY 2 (CONTINUED)

Moderator: The buyer and seller have placed their orders with their stockbrokers. Let's watch as those orders are sent to the stock exchange to be completed.

Buyer's Stockbroker: [*Goes to order machine and presses buttons*] First, I have to send this order to buy 100 shares of McDonald's (MCD) stock to my company's clerk on the floor of the New York Stock Exchange.

Buyer's Clerk: [*noticing that the order machine is running*] The order machine is running again. It must be another order from one of our offices. Let's see what it says. [Reads.] Buy 100 shares of MCD stock—that's McDonald's. I'd better give this order to our company's broker on the floor. [*Clerk signals his company's representative on the trading floor.*]

Buyer's Floor Broker: There's my clerk signaling me. I'd better see what's up. [*The broker goes to a booth on the side of the trading floor, gets the order, and reads.*] Buy 100 shares of MCD stock at the market. I'll have to do that at the McDonald's trading post. [*The floor broker walks there.*]

Moderator: Now let's see how the seller's stockbroker handles the seller's order.

Seller's Stockbroker: [*goes to order machine and presses buttons*] I have to send this order to sell 100 shares of McDonald's (MCD) stock to my company's clerk on the floor of the New York Stock Exchange.

Seller's Clerk: [*noticing that the order machine is running*] Here comes another order from one of our offices. [*Reads.*] Sell 100 shares of MCD stock—that's McDonald's. I'll deliver this order to our company's broker on the floor. [*Clerk signals his company's representative on the trading floor.*]

Seller's Floor Broker: I see my clerk signaling me. I'd better see what's up. [*The broker goes to a booth on the side of the trading floor, gets the order, and reads.*] Sell 100 shares of MCD stock at the market. I'll have to do that at the McDonald's (MCD) trading post. [*The broker goes to the MCD trading post where the buyer's floor broker is standing.*]

Moderator: Stock exchanges have various locations called *posts*, where different stocks are traded. Each post has a *specialist* assigned to it. One of the jobs of a specialist is to quote the current price of a stock. Let's see what happens when the stockbrokers for the buyer and seller take their orders to the specialist at the MCD trading post.

Buyer's Floor Broker: [*walks over to the MCD trading post, where other brokers have orders to buy or sell MCD stock and looks at imaginary video screen*] How's McDonald's?

Specialist: Forty to forty and a quarter.

ACTIVITY 2 (CONTINUED)

Moderator: The first number the specialist said is the current bid price. This price of $40 is the highest price buyers are willing to pay for a share of McDonald's stock. The second price is the asked price. This price of $40.25 is the lowest amount sellers are willing to accept for a share of MCD.

Seller's Floor Broker: [*approaches the MCD trading post, checks the video screen and announces to the group of brokers*] One hundred at forty and a quarter.

Moderator: This means that the broker is offering to sell 100 shares at $40.25.

Seller's Floor Broker: [*hearing no response from the crowd of brokers*] One hundred at forty.

Buyer's Floor Broker: [*approaches seller's floor broker*] Sold!

Moderator: Standing next to the post is an employee of the stock exchange, called a floor reporter. Within seconds, the floor reporter records the sale on the computerized Market Data System. The new sale price is then reported on the computer monitor at the stock exchange and *MCD 100 40* flashes on electronic displays around the world.

Buyer's Floor Broker: Now I've got to let our clerk know about this trade. [*The broker walks over to the buyer's clerk.*] Hi, Clerk, I just bought those 100 shares of McDonald's at forty.

Buyer's Clerk: Thanks. I'll send a message back to our stockbroker. [*The clerk then presses numbers on the order machine.*]

Buyer's Stockbroker: [*hearing the order machine*] The order machine is going again. Let's see what we've got. [*Reads and comments.*] Good, we bought those 100 shares of McDonald's for our buyer. I'd better let him (her) know. [*The broker calls the buyer on the telephone.*] Hello, Buyer? We got you the 100 shares that you wanted of McDonald's at $40 a share. I'll get a confirmation in the mail to you today. You'll need to pay us $4,000 plus my broker's commission.

Buyer: Great! I knew you'd do it, but I didn't expect you to be so fast. I called you only ten minutes ago.

Moderator: The seller also receives good news. Let's check and see what's happening.

Seller's Floor Broker: I have to tell our clerk about the sale. [*The broker walks over to the seller's clerk.*] Hi, Clerk. I just sold those 100 shares of McDonald's stock at forty.

Seller's Clerk: Thanks. I'll tell our stockbroker back in our office. [*The clerk then presses numbers on the order machine.*]

Seller's Stockbroker: [*hearing the order machine*] Something's coming in on our machine. [*Reads and comments.*] Good news, we sold those 100 shares of McDonald's for our seller.

ACTIVITY 2 (CONTINUED)

I better let him (her) know. [*The broker then makes a call to the seller on the telephone.*] Hello, Seller? We sold your 100 shares of McDonald's for $40 a share. I will send confirmation of the sale and a check for $4,000 less my broker's commission.

SELLER: Great! And it took less than 10 minutes.

MODERATOR: The stock market allows people to buy and sell stocks quickly and easily. Both our buyer and seller are happy with the trade because they both benefited from the trade. And, they are pleased that the brokers and people at the stock exchange made the trade possible by helping the buyer and seller find each other. This is how markets work and why they are so important to the economy.

ACTIVITY 3
TRADING STOCKS ON WALL STREET

Name ______________________________ **Date** ______________________________

Part 1

Directions: Each of the statements below describes one of eight steps in trading a stock on the New York Stock Exchange. Put the steps in the correct order by numbering them 1 for the first step through 8 for the last step.

________ a. A clerk working for the same brokerage company as the stockbroker gives an order to the company's floor broker, who works on the floor of the stock exchange.

________ b. Two floor brokers on the exchange floor who represent Brian's and Sara's orders agree on a price.

________ c. Brian pays for the stock and his broker's commission and has 100 shares of Disney stock added to his account. Sara receives money from the sale of her stock, minus her broker's commission.

________ d. Sara Davis, in Atlanta, Georgia, wants to sell 100 shares of her Disney stock to help pay for her new car. Brian Jones, in Omaha, Nebraska, wants to buy stock in Disney. They each call their brokers and ask for quotes (the highest bid and lowest offer) on Disney stock.

________ e. Two floor brokers, each with an order to buy or sell Disney stock at the market, go to the trading post. They compete with other brokers to get the best price for their customers.

________ f. Using an electronic data system, brokers give Brian and Sara the latest quotes on Disney stock. Sara decides to sell at the market, and Brian decides to buy at the market.

________ g. Clerks at the stock exchange send confirmation of the deal to Brian's and Sara's stockbrokers.

________ h. The two stockbrokers representing Sara and Brian send their orders to the floor of the NYSE. Clerks of the two brokerage firms receive these orders on the sidelines of the trading floor.

ACTIVITY 3 (CONTINUED)

Part 2

Directions: How does each of the following people make stock trades possible? Match the descriptions with the individuals.

a. Clerk at stock exchange
b. Floor broker on the stock exchange floor
c. Specialist
d. Stockbroker

_______ 1. Receives customers' orders to buy or sell stocks, provides quotes to customers, and communicates customers' orders to the company's clerk on the floor of the stock exchange.

_______ 2. Completes customers' orders by offering to buy or sell stocks at the proper posts on the trading floor.

_______ 3. Quotes bid and asked prices to stockbrokers on the floor and executes limit orders for brokers.

_______ 4. Receives buy and sell orders from office stockbrokers and communicates those orders to the company's brokers on the floor. Also informs office stockbrokers of transactions completed on the trading floor by brokers.

LESSON 6
HOW ARE STOCK PRICES DETERMINED?

INTRODUCTION

Students often do not know how prices are determined in a market. They may think some one individual or official is responsible for setting the price each day. This lesson demonstrates how prices are determined by the behavior of many individuals in the market.

ECONOMICS BACKGROUND

This lesson demonstrates how supply and demand interact to create a market-clearing price. *Supply* refers to the different quantities of a resource, good, or service that will be offered for sale at various prices during a specific time period. *Demand* refers to the different quantities of a resource, good, or service that will be purchased at various prices during a specific time period. The *equilibrium price* is the price at which buyers want to buy the same amount of a good or service that sellers want to sell.

LANGUAGE OF ECONOMICS

Demand: The different quantities of a resource, good, or service that will be purchased at various possible prices during a specific period of time.

Equilibrium Price: The price of a stock at which buyers want to buy the same number of shares as sellers want to buy. This price is also called the Market-Clearing Price.

Supply: The different quantities of a resource, good, or service that will be offered for sale at various prices during a specific time period.

CROSS CURRICULUM SKILLS

Students develop skills in reading and speaking. They collect and organize data, interpret and analyze tables of data, use computation to solve problems, and construct and interpret a line graph.

OBJECTIVES

1. Students describe how changes in a stock's price influence the number of shares people want to buy.
2. Students describe how changes in a stock's price influence the number of shares people want to sell.
3. Students explain why buyers and sellers adjust their offering bids and prices to achieve the equilibrium price for a stock.
4. Given a table showing demand and supply data for a stock, students determine the stock's equilibrium price.

MATERIALS

- ◆ Visuals 1, 2, 3, 4, and 5
- ◆ Activities 1, 2, 3*, 4*, 5*, and 6*

TIME REQUIRED

One or two class periods

PROCEDURE

A. Explain to students that today they are going to investigate why stock prices change.

B. Display Visual 1, *Stock Prices: Why Do They Change?*. Explain to students that price changes in the stock market are a mystery to many people. Today they will solve that mystery by answering a short survey, participating in a simulation, analyzing their behavior, and comparing it to the behavior of people engaged in buying and selling in the stock market. They will learn how the laws of supply and demand influence the price of a stock.

C. Divide the class into two groups: buyers and sellers. Distribute copies of Activity 1, *The Highs and Lows of Washing Cars* and Activity 2, *The Highs and Lows of Washing Cars*. Ask each student to read and complete the activity. While they are doing so, put the following summary table on the chalkboard:

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*Activities 3, 4, 5, and 6 are adapted from *The Stock Market Game Guide*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc., and used here with permission.

Price for car wash	Number of hours supplied	Number of hours demanded
$ 25		
$ 20		
$ 15		
$ 10		
$ 5		
$ 0		

D. ✎ When students have made their estimates and filled in the blanks on their Activity sheets, ask one of the buyers to collect all the buyers' sheets and one of the sellers to collect all the sellers' sheets. Then have a few of the buyers tally the buyers' sheets and a few of the sellers tally the sellers' sheets. Tell them they should add the number of car washing hours demanded or supplied at each price. Have the students put the totals in the appropriate columns in the summary table on the chalkboard.

E. The buyers' column in the summary table shows that people will buy more car washing hours at lower prices than at higher prices. Inform students that they have revealed *the law of demand*. Display Visual 2, *The Law of Demand*, to stress this point.

F. Now direct students attention to the sellers' column. Inform students that they have revealed *the law of supply*. Display Visual 3, *The Law of Supply*, to stress this point.

G. Tell students they are now going to use this knowledge of supply and demand to participate in a market. Assign one-half of the students to the role of seller and one-half to the role of buyer by cutting out the cards in Activity 3, *Buy and Sell Cards*, and distributing them to the class, one per student. Be sure that you mark the prices on the buy cards in one color and the sell cards in another to reduce confusion once the game starts.

H. Ask students to read their cards carefully. Assign one student to be keeper of the cards and record the transactions on Visual 4, *Classroom Summary*. Review Activity 4, *Sunscape Company Game*, the instructions for playing the game with them and answer any questions they have about their roles. Also distribute Activity 5, *Student's Score Sheet*, and review the directions for keeping the score sheet.

I. After five minutes, stop the first round of playing. Use Visual 4 (which the recorder has completed for the first round to show students a summary of their exchanges). Tell students that the summary contains information useful to them in the next round. (Do not explain the information.) The data should show a wide range of prices, but more of the prices will be near $15 because that price balances the amounts of stock demanded and supplied. Students will discover that their total gain will probably be greatest by having more exchanges at $15, even though each of those exchanges provides a smaller gain than they originally wanted. As students obtain more information about the equilibrium price, exchange prices will concentrate more closely around it.

J. Have students play the second and third rounds. After the last round, use Visual 4 to show students a summary of their exchanges. Ask students what, if anything, that information tells them. (*Answer: It should indicate that as trading progressed through each round, competition among players helped concentrate exchange prices more closely around the price of $15.*)

K. ✎ Distribute Activity 6, *Nice Price*. Explain to students that it will help them understand why the exchanges prices in this game concentrated around $15. Have them read and complete the activity. Discuss with them the answers to the following questions:

Answers for Table 2

TABLE 2

Price Per Share	Number of Shares Sellers Want to Sell	Number of Shares Buyers Want to Buy
$25	**22**	12
$20	**18**	18
$15	**10**	**26**
$10	2	**34**
$ 5	0	**38**

Answers to questions

1. *The tables show evidence for the law of demand because buyers want to purchase more shares at lower prices than at higher prices. The tables also show evidence for the law of supply because sellers want to sell more shares at higher prices than at lower prices.*
2. *$20*
3. *Go up*
4. *12*
5. *22*
6. *Surplus*
7. *Lower*
8. *38*
9. *0*
10. *Shortage*
11. *Raise*

CLOSURE

Display Visual 5, *One More Time*, and review the main points of the lesson:

A. Stock prices change as a result of changes in the supply and demand for that individual stock.

B. The law of demand states (with respect to stocks) that buyers choose to purchase more shares at lower prices than at higher prices.

C. The law of supply states (with respect to stocks) that sellers choose to sell more shares at higher prices than at lower prices.

D. An equilibrium price for stocks exists when the amount of shares demanded at that price equals the amount of shares being supplied.

ASSESSMENT

Multiple Choice Questions

1. An equilibrium price exists in the market place because
   a. it is the average of all offered stock prices.
   b. it is the buyers' favorite, first-choice price.
   c. it is the sellers' favorite, first-choice price.
   *d. it is the price that balances the amount of shares demanded with the amount of shares supplied.

2. Who sets the price of a stock in the stock market?
   a. Securities and Exchange Commission
   b. Stock Exchange President
   *c. buyers and sellers
   d. Congress and the President

ESSAY

✍ Consider the following comment made in a television news program editorial:

Stock prices are too high! The average person cannot afford to buy stocks as investments anymore. This situation is a threat to our economy. If people cannot afford to buy stocks anymore they will lose faith in the American Dream. Government regulators should require all sellers to make stocks available at $30 or less so everyone can afford them. If low stock prices existed for good companies, everyone would have a chance to be rich.

Use the ideas of supply, demand, and equilibrium price to evaluate this statement.
(Answer: Setting a price on stocks will prevent the price from responding to changing conditions of supply and demand. If the price is set too low, many people wishing to buy stocks will not be able to purchase them because sellers will not make enough available at that low price to satisfy every buyer. Moreover, if you can buy a stock at a low price but it cannot rise in the future, you will not make money or grow more wealthy.)

JOURNAL

✍ Create a line graph in your journal that shows the supply and demand relationship described in "The Highs and Lows of Washing Cars." The graph should be drawn with **price** on the vertical axis and **quantity** on the horizontal axis. Two lines should be drawn—one to illustrate demand and one to illustrate supply. Explain to yourself why the lines intersect at the equilibrium price, and what would happen if someone offered a price greater or less than the equilibrium price.

VISUAL 1
STOCK PRICES: WHY DO THEY CHANGE?

I don't think buying stocks is such a good idea. Something is wrong when the company doesn't change but the stock price keeps changing every minute of every hour of every day. Whoever is setting that price doesn't know the real value of that company.

Statement by a Philosopher

VISUAL 2

THE LAW OF DEMAND

People choose to buy more of something at lower prices than at higher prices.

VISUAL 3
THE LAW OF SUPPLY

People choose to sell more of something at higher prices than at lower prices.

BEST COPY AVAILABLE

VISUAL 4
CLASSROOM SUMMARY

Directions for the Recorder: Mark a slash (/) in the box of the agreed-upon price each time a seller reports an exchange to you.

Price	Round 1	Round 2	Round 3
$50			
$45			
$40			
$35			
$30			
$25			
$20			
$15			
$10			
$5			

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VISUAL 5
ONE MORE TIME

A. Stock prices change as a result of changes in the supply and demand for that individual stock.

B. The law of demand states that buyers choose to purchase more shares at lower prices than at higher prices.

C. The law of supply states that sellers choose to sell more shares at higher prices than at lower prices.

D. An equilibrium price exists when the amount of shares demanded at that price equals the amount of shares being supplied.

ACTIVITY 1
THE HIGHS AND LOWS OF WASHING CARS

Name ______________________________ **Date** ______________________________

Imagine you had just turned 16 and passed your driver's test when your parents went crazy. In fact, most of the parents in the neighborhood went crazy. They all agreed that parents would no longer pay for the gasoline used by their teenagers. From now on, teenagers would have to pay for all the gas they used, or they could not use the family car. "But, Dad," you protest, "how am I going to afford to use the car? You and Mom don't give me enough allowance to pay for all my personal expenses now. How am I supposed to get the money to pay for gasoline?" "Try using the old-fashioned method," Dad says. "Earn some money by doing some useful work. Speedy Home Car Wash, Inc., is looking for employees. See if you can work for them and earn enough extra money to cover your gasoline costs."

If you worked for Speedy Home Car Wash, Inc., you could choose the number of hours you would work each month, and you could arrange the hours to fit your schedule. How many hours per week do you think you would be willing to work at the car wash to earn money to cover your gasoline costs? Examine the table below. Then estimate the highest number of hours you would be willing to work at each wage level.

For example, suppose you were offered the job as a volunteer, at no wage. Write in the number of hours you would work each week at that wage. Then consider another wage, like $5 per hour. How many hours would you work at that wage? Complete all the blanks in the same manner. If you would not work at a particular wage, write a zero in the blank next to the wage.

Amount you would receive as wages for one hour	Number of hours per week you would work at this wage
$25	__________
$20	__________
$15	__________
$10	__________
$5	__________
$0 (you receive no money)	__________

ACTIVITY 2
THE HIGHS AND LOWS OF WASHING CARS

Name ______________________ **Date** ______________________

Imagine that you are a real estate agent and you drive your car every day, helping people find homes to buy in your community. A clean car makes a good impression from the outside, and a clean inside allows people to ride in the car and concentrate on homes rather than the dirt in your back seat. You like to keep your car very clean, but it takes a lot of your valuable time to keep it clean. Suppose you could pay someone to wash, polish, dust, and vacuum your car. That person would come to your home and finish the job in one hour. The only catch is that you must pay for that service with your own money.

If Speedy Home Car Wash provided this service, how many car washings would you buy each month? Examine the table below. Then estimate the highest number of car washings you would buy each month at each price.

For example, suppose you didn't have to pay anything for the services. In the blank next to $0, write the number of car washings you would want each month if they were free to you. Now go to the next price of $5. Write the maximum number of car washings per month you might buy if you had to pay $5 for each car washing. Then make similar estimates for each of the other prices. If you would not buy any car washings at a particular price, write a zero in the blank next to that price.

Amount you pay for a car washing	Number of car washes per month you would buy at this wage
$25	________
$20	________
$15	________
$10	________
$5	________
$0 (you receive no money)	________

ACTIVITY 3
BUY AND SELL CARDS

Name ____________________ **Date** ____________________

To the Teacher: Make 13 copies of this sheet and cut out the **Sell** and **Buy** cards. You should have 26 copies of each card. Before distributing the cards to students, fill in the blank on each card with the prices as indicated in the table below.

Price Per Share	Number of Cards	
	Sell Cards	Buy Cards
$25	4	0
$20	8	6
$15	8	8
$10	6	8
$ 5	0	4
Total	26	26

Sunscape Company

Sell *one share* of Sunscape Company stocks for as much as you can get. But if you accept less than ________, you lose money.

Sunscape Company

Sell *one share* of Sunscape Company stocks for as much as you can get. But if you accept less than ________, you lose money.

Sunscape Company

Buy *one share* of Sunscape Company stocks for as little as you can get. But if you pay more than ________, you lose money.

Sunscape Company

Buy *one share* of Sunscape Company stocks for as little as you can get. But if you pay more than ________, you lose money.

ACTIVITY 4
SUNSCAPE COMPANY GAME

Name ______________________ **Date** ______________________

Directions for the Game

In the following game, you will buy or sell stocks in an imaginary business called Sunscape Company. Half of you will be buyers and half will be sellers. In addition, a Card Keeper will give you a card with important instructions about each exchange. A Recorder will also keep track of the exchanges you make.

You will play the game in three 5-minute rounds. Your goal is to make as much money as you can by the end of the game. If you are a seller, however, you must deal with the *law of demand* when you try to get a high price for your shares. If you are a buyer, you must deal with the *law of supply* when you try to pay a low price for the shares you want.

You may exchange shares of stock at any price, as long as you can find a willing buyer or seller. But that price must always be in multiples of 5. That is, the price for one share may be $5, $10, $15, $20, and so on. You begin the game when you receive an instruction card from the Card Keeper. Follow these instructions when you look for a buyer or seller. Immediately after each exchange, sellers must report the price to the Recorder, who writes it on a summary sheet. Both the seller and the buyer then get another card from the Card Keeper and return to the trading place in the classroom. If you can't find a buyer or seller, you may return your instruction card to the Card Keeper and get another one.

Directions for the Score Sheet

When you get a card from the Card Keeper, put the price written on the card in the column headed *Price on Your Card*. When you buy or sell a share of stock, write the exchange price in the column headed *Exchange Price*. When a round of play ends, draw a line across your score sheet under the last exchange you made to show the end of that round. For each exchange, find the difference between the *Price on Your Card* and the *Exchange Price*. Write this difference in the gain or loss column. Here is an illustration for sellers and one for buyers:

> **For Sellers:** If the exchange price is greater than the price on your card, you have gained money. Write this gain in the column headed *Gain*. If the exchange price is lower than your card price, you have a loss. Write the difference in the column headed *Loss*. If both prices are equal, you have neither a gain nor a loss, so write a zero in both columns.
>
> **For Buyers:** If the exchange price is less than the price on your card, you have gained money. Enter this gain in the column headed *Gain*. If the exchange price is greater than your card price, you have a loss. Enter the loss in the column headed *Loss*. If both prices are equal, you have neither a gain nor a loss. Write a zero in both the *Gain* and the *Loss* column.

At the end of round 3, add up the gains in the *Gain* column and the losses in the *Loss* column. Enter the results in the appropriate blanks at the bottom on the sheet. Subtract your total losses from your total gains and put the difference in the blank marked *Net Gain or Loss*. This is the total amount of money you made or lost during the game.

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ACTIVITY 5
STUDENT'S SCORE SHEET

Name ______________________ **Date** ______________________

Circle one: I am a Buyer I am a Seller

Number of Exchanges	Price on Your Card	Exchange Price	Gain	Loss
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		Total		

Net Gain or Loss
(Circle one) ______________

ACTIVITY 6
NICE PRICE

Name ______________________________ **Date** ______________________________

Why did exchange prices of Sunscape Company's stock concentrate around $15 per share? The answer is that this price was the only one that balanced the market. Here's why.

A market exists whenever buyers and sellers exchange with one another. But the amount sellers want to sell can be very different from the amount buyers want to buy. In the game you played, only a price of $15 per share balanced these two amounts.

The table below shows what was happening in the market for Sunscape Company's stocks. The table shows what all the buyers' cards were telling them to do. And it shows what all the sellers' cards were telling them to do.

TABLE 1

Price Per Share	Number of Shares Sellers Want to Sell	Number of Shares Buyers Want to Buy
$25	26	0
$20	22	6
▶ **$15**	**14**	**14**
$10	6	22
$ 5	0	26

Note: The equilibrium price is the only one at which buyers want to buy the same number of shares that sellers want to sell. Here, a price of $15 is the equilibrium price because it balances these two quantities at 14 shares.

How to Balance a Market

The numbers in Table 1 illustrate the laws of demand and supply. Buyers and sellers of stocks behave the same way your class behaved as buyers and sellers of car washing hours. Sellers offer more stocks for sale at higher prices than at lower prices. In contrast, buyers want to buy fewer stocks at higher prices than at lower prices.

For example, look at Table 1 to see what happens when the price is $25. At this price, sellers want to sell 26 shares. But buyers do not want to buy any shares at that price. So the market is unbalanced. A *surplus* of 26 shares exists. This means sellers want to sell 26 more shares than buyers want to buy *at that price*. Because of the surplus, sellers reduce their prices. Only by decreasing their prices to $15 per share can they sell all the shares they want to sell.

On the other hand, the price can also be too low. Look what happens when the price is $10 per share. Here, too, the market is unbalanced. A *shortage* of 16 shares exists. This means that buyers want to buy 16 more shares than sellers want to sell *at that price*. Because of the shortage, buyers increase their prices. Only by increasing their prices to $15 per share can they buy all the shares they want.

A price of $15 per share turns out to be a special price. It is special because of what it does: It balances the number of shares that buyers and sellers want to trade. Because of its special role in balancing the share demanded and supplied, this price is called the *equilibrium price*. It is the only price at which the shares demanded and supplied are in equilibrium.

The Ups and Downs of Stock Prices

The game you played shows how buyers and sellers adjust their prices to reach a balance, or equilibrium. But these balances seldom stay the same. Demand and supply are continually changing, and buyers might want to buy more at each possible price. If so, they bid the price up to a new equilibrium. Or sellers might want to sell more at each possible price. If so, they push the price down to a new equilibrium level.

ACTIVITY 6 (CONTINUED)

So there is no mystery behind the ups and downs of prices for stocks—or for other goods and services. Prices change because buyers and sellers become more or less willing to buy or sell something. Then they work out new equilibrium prices to balance the market—just as your class did for Sunscape Company stocks.

Let's see how an equilibrium price can change. Suppose that Sunscape Company suddenly develops a new product that is expected to be a top seller. People expect the company's future profits to be higher, so the stock becomes a better investment today. Because stockholders expect to make even more money, they want to keep more shares of Sunscape Company stocks for themselves. So they put fewer shares up for sale. At the same time, buyers become more willing to buy the company's stock, so they demand more of them.

For example, check Table 1. Assume that sellers now offer 4 *fewer* shares at each of the prices shown in the table. Write the new number of shares they now want to sell at each price in the appropriate blank in Table 2. The first two entries have been completed for you.

TABLE 2

Price Per Share	**Number of Shares Sellers Want to Sell**	**Number of Shares Buyers Want to Buy**
$25		12
$20		18
$15		
$10	2	
$ 5	0	

Also assume that buyers want to buy 12 *more* shares at each of the prices shown in Table 1. Write the new number of shares they now want to buy at each price in the appropriate blank in Table 2. The first two entries have been completed for you.

The table you just completed shows an increase in demand and a decrease in supply. Demand has increased and supply has decreased because the stock is now more attractive. Current owners want to hold on to more shares. And other investors are more eager to buy some for themselves.

ACTIVITY 6 (CONTINUED)

Some Questions

1. Both tables above illustrate the laws of demand and supply. Briefly explain how they illustrate these two laws.

2. Table 2 shows that demand and supply for Sunscape Company's stocks have changed from what they were in Table 1. Because of these changes, the stock's equilibrium price will also change. Table 2 shows that the new equilibrium price is ________ .

3. Did the good news about Sunscape Company's future profits cause the equilibrium price of a share of its stock to go up or down? ________

4. Suppose that sellers are asking $25 for their shares of stock. At this price, how many shares do buyers want to buy? ________

5. How many shares do sellers want to sell at $25 per share? ________

6. At $25 per share, would a surplus or a shortage exist for Sunscape Company's stock? ________

7. As a result, would sellers raise or lower their prices? ________

8. Suppose the stock's price is $5 per share. At this price, how many shares do buyers want to buy? ________

9. How many shares do sellers want to sell at $5 per share? ________

10. At $5 per share, would there be a surplus or a shortage of shares in Sunscape Company's stock? ________

11. As a result, would buyers raise or lower their prices? ________

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LESSON 7
HOW TO READ THE STOCK TABLES

INTRODUCTION

In this lesson, students learn how to find and read the stock tables in the financial pages of the newspaper. The stock listings used in this lesson are from *The Wall Street Journal.* Your local newspaper may use a slightly different format. You might want to substitute your own stock table in Activity 2, *Reading a Stock Page.*

ECONOMICS BACKGROUND

Students learn that a stock price defines the terms of trade between a buyer and a seller. When a buyer and seller voluntarily agree on a price, both the buyer and seller benefit, or the trade would not be made.

The newspaper stock listings provide important information for the investor. In a market economy, relative prices and the ratios among them provide the essential information consumers, producers, investors, and resource owners need in order to decide whether, what, and how much to buy. To grasp fully the important function of the information provided by prices, imagine trying to invest if no prices were shown. To relate this to the students' experience, ask them to imagine shopping in a supermarket in which no prices are shown for items on the shelves. Imagine choosing between two job opportunities without knowing the salaries offered by each.

Like any other economic activity, gathering information is not free. Economists refer to the cost of gathering information as *information costs.* Newspaper stock listings, broker services, investment books and newsletters, and on-line investor services make the gathering of information easier and reduce information costs for investors.

LANGUAGE OF ECONOMICS

Information Costs: The cost of gathering information to make an informed choice in a market economy.

Market: The process through which buyers and sellers exchange with one another.

Relative Prices: One price compared to another, or the ratio between prices. A collection of relative prices constitutes the price structure of a market.

CROSS CURRICULUM SKILLS

Students develop skills in reading, writing, and computing. They interpret and analyze tables of data, apply percents and ratios to problems, and use equivalent forms of fractions and decimals in problem situations.

OBJECTIVES

1. Students read and interpret information about stock prices in the financial section of a daily newspaper.

2. Students use the stock tables to find specific information about stocks.

MATERIALS REQUIRED

- ◆ Visual 1*
- ◆ Activities 1*, 2*, and 3*

TIME REQUIRED

Two class periods

PROCEDURE

A. Explain to the students that the purpose of this lesson is to help them learn how to read newspaper stock tables. *The Stock Market Game* requires them to choose stocks listed in the daily newspaper. They will not be able to make informed choices unless they can understand the information in the stock tables.

B. Distribute a copy of Activity 1, *How to Read a Stock Table,* to each student.

C. Project Visual 1, which is a copy of the stock table *How to Read a Stock Table,* shown on Activity 1.

D. Have the students read Activity 1.

E. Using Visual 1, go over the information on the stock table. Answer students' questions about the stock table.

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* These activities are adapted from *The Stock Market Game,* published in 1990 by the Securities Industry Foundation for Economic Education, Inc. and used here with permission.

F. Tell the students that most newspapers publish three stock tables. The first is for the New York Stock Exchange, which is the source of the table they have been looking at. The New York Stock Exchange (NYSE), located in New York City, is the largest organized stock market in the United States. Large national companies are listed on the NYSE. The second stock table is for the American Stock Exchange (AMEX), also located in New York City. It lists data for smaller companies and for many energy-related companies. The third stock table is for the Nasdaq Stock Market. The Nasdaq Stock Market has many high technology companies. The Nasdaq lists more than 5,400 companies, although newspapers sometimes print prices just for the top tier or largest companies, known as Nasdaq National Market Companies. Prices of more that 5,000 stocks are communicated to brokers and dealers by means of computers and telephones. Through this electronic communication medium, brokers and dealers trade stocks with one another.

G. Give a copy of Activity 2, *Reading a Stock Page*, to each student. Have the students write the answers to the questions individually or in small groups.

H. ✎ Discuss the answers to the questions in Activity 2. They are as follows:

1. PIR
2. 190,100
3. 24
4. $23.25 ($57.125 − $33.875)
5. PerkFamilyR—10.8%
6. PhillipsVanH—41
7. 89⅞ or $89.875
8. $62 ($63¼ − $1¼)
9. $28,562.50 plus brokerage fees ($57.125 × 500)
10. PhilLongD, PhilpsGas, PhnxDuff
11. $2425 ($53.385 − $29.125 × 100)

I. Distribute Activity 3, *The Scavenger Hunt*, to teams of three or four students. Have each team complete the Activity. Review the following answers with students:

1. *Answers will vary.*
2. *The New York Stock Exchange (NYSE), the Nasdaq Stock Market, and the American Stock Exchange (AMEX).*
3.

Stock Name	Stock Market	Abbreviated Name of the Company
Apple Computer	Nasdaq	AppleCPTR
International Business Machines	NYSE	IBM
Hasbro, Inc.	AMEX	Hasbro
Coca-Cola	NYSE	Coca-Cola

4. *Answer in the daily newspaper; a preferred stock has the letters* ***pf*** *following the company's name.*
5. *Answer in the daily newspaper; a stock split is indicated by the small letter s to the left of the stock's listing.*
6. a-g. *Answers in the daily newspaper.*
7. a. and b. *Answers in the daily newspaper.*
8. *The listings show the number of shares traded, the prices at which the shares were traded over a period of time, stock splits, and any dividends. This information is useful when the student is trying to decide whether to buy a given stock, the price to pay, and the number of shares to buy.*

CLOSURE

Ask the students these questions to emphasize how information provided in the stock listings is important for playing *The Stock Market Game*.

1. What information do newspaper stock listings provide?
   (*Information about stock prices, company dividends, the number of shares traded, etc.*)

2. How can newspaper stock listings help when you are playing *The Stock Market Game?*
   (*The listings show the number of shares usually traded and the prices at which the shares were traded over a period of time. This information is useful when you are deciding whether to purchase a given stock, what price to pay, and how many shares to buy.*)

ASSESSMENT

Multiple Choice Questions

(based on the following stock table)

Dec. 22, 1995

52 weeks					Yld		Vol				Net
Hi	Lo	Stock	Sym	Div	%	PE	100s	Hi	Lo	Close	Chg
s65½	34⅜	Nike	NIK	—	—	20	6669	38⅜	36½	37⅝	–⅝

1. You have decided to invest $50,000 in Nike stock. Approximately how many shares can you buy at the December 22, 1995, closing price?
   - a. 655
   - *b. 1328
   - c. 2500
   - d. 666,900

2. What was the closing price for Nike yesterday (December 21, 1995)?
   - a. 37⅝
   - b. 36½
   - *c. 38¼
   - d. 34⅜

ESSAY

✍ What do you think is the most valuable information in the stock table for playing *The Stock Market Game?*

(Students might make a case for several points, including information on highest and lowest prices, stock splits, preferred stock status, percentage yield, price-earnings ratio, volume of shares, and so on.)

JOURNAL

✍ Find the stock that had the highest percentage gain yesterday. Now try to explain why it had such a high percentage gain. What are the possible explanations? Do recent financial news reports provide any information that helps you determine the actual explanation?

VISUAL 1
HOW TO READ A STOCK TABLE

New York Stock Exchange Composite Transactions
Dec. 21, 1995

52 weeks Hi	52 weeks Lo	Stock	Sym	Div	Yld. %	PE	Vol 100s	Hi	Lo	Close	Net Chg
68½	47⅝	AT&T	T	1.32	2.0	25	19728	66½	65½	65⅛	–⅞
80⅜	48¾	CocaCola	KO	.88	1.2	32	20942	77¼	74¼	74¼	–3
64¼	44⅜	Disney	DIS	.36	.6	23	12713	60⅝	59½	59⅝	+½
26¾	22⅜	GenMotor*pf*		1.98	7.5	...	11	26⅜	26⅜	26⅜	—
s66⅞	37¼	Pfizer	PFE	1.04	1.7	26	12725	63⅜	61½	61½	–1¾
1	2	3 4	5	6	7	8	9	10		11	12

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ACTIVITY 1
HOW TO READ A STOCK TABLE

Name ______________________ **Date** ______________________

New York Stock Exchange Composite Transactions
Dec. 21, 1995

52 weeks					Yld.		Vol				Net
Hi	**Lo**	**Stock**	**Sym**	**Div**	**%**	**PE**	**100s**	**Hi**	**Lo**	**Close**	**Chg**
68½	47⅝	AT&T	T	1.32	2.0	25	19728	66½	65½	65⅛	−⅞
80⅜	48¾	CocaCola	KO	.88	1.2	32	20942	77¼	74¼	74¼	−3
64¼	44⅜	Disney	DIS	.36	.6	23	12713	60⅝	59½	59⅝	+½
26¾	22⅜	GenMotor*pf*		1.98	7.5	...	11	26⅜	26⅜	26⅜	—
s66⅞	37¼	Pfizer	PFE	1.04	1.7	26	12725	63⅜	61½	61½	−1¾

1 2 3 4 5 6 7 8 9 10 11 12

1. The small letter *s* signifies a **stock split** sometime during the last 52 weeks. A stock split is the division of a stock into a larger number of lower-priced shares. Businesses often split their stocks to encourage stock sales by reducing the price per share. For example, a 2-for-1 split means the company gives you an additional share for every one you now own. But the company also divides the price of each share in half. So if a $50 share is split 2-for-1, at the time of the split you end up with two shares, each worth $25.

2. These two columns report the **highest** and **lowest prices** of a stock during the last 52 weeks. (Some newspapers do not list these two columns.) The highest price of a share of AT&T (American Telephone and Telegraph) was 68½, which is 68 dollars and 50 cents. The lowest price was 47⅝. Prices are shown in dollars and fractions of a dollar. For example, ¼ is 25 cents and ⅛ is 12.5 cents. When reading a stock table, you will want to change fractions into decimals. Here is a list of all the fractions used in a stock table to express the prices of stocks:

1/16 = .063 ⅛ = .125 ¼ = .25 ½ = .50
⅜ = .375 ¾ = .75
⅝ = .625
⅞ = .875

3. This column is headed by the word *stock*. It presents an abbreviated **name of the company** issuing the stock.

4. If the letters *pf* appear immediately after the company's name, that stock is a **preferred stock**. Otherwise, the stock is a common stock. Preferred stocks have "preferred treatment" when they are compared with common stocks. They usually pay a fixed dividend, which must be paid before common stocks can receive any dividends. Should the company go bankrupt, preferred shareholders would receive payment prior to common stockholders. Holders of common stock own all of the profit remaining after preferred stockholders receive their dividends. The more profit a company earns, the more profit there is for common stockholders. But if a company loses money, owners of common stock share that loss up to the amount they have invested in the stock. So owners of common stock bear most of the company's risk. In return, they stand to gain the most if the company is profitable. In addition, a share of common stock usually allows its owner to vote for a company's top officials, the board of directors.

ACTIVITY 1 (CONTINUED)

5. These letters refer to the **stock symbol for the company**. You will use the symbol when buying or selling shares of stock in *The Stock Market Game*. The symbol for Pfizer is PFE, for example.

6. The number in this column shows the dividend paid for each share of stock. The dividend is stated as an annual disbursement based on the last monthly, quarterly, semiannual, or annual payout. Most dividends are paid quarterly, or four times a year. The annual dividend for General Motors preferred stock is $1.98. To find the quarterly dividend, divide by four. The quarterly dividend is 49½ cents. Some companies do not pay dividends.

7. This column reports the **percentage yield**, which is the amount of dividends received per share of stock compared with the price of that stock. The yield is calculated by dividing the dividend per share of stock by the last (closing) price of the stock and then multiplying by 100 to obtain a percentage. For example, Coca-Cola has a dividend of $.88. In the column headed *close* at the far right is a last or closing price of $74.25. By using these two numbers, you calculate the yield on Coca-Cola's stock as follows:

   Percentage Yield =
   (dividend ÷ closing price) × 100 =
   ($.88 ÷ $74.25) × 100 =
   0.12 × 100 = 1.2%

8. PE stands for **price-earnings ratio** or P-E ratio. This ratio measures how many times greater the stock price is than the earnings per share. The P-E ratio is calculated by dividing the stock's last (closing) price by the earnings per share for the latest year. For example, Pfizer shows a price-earnings ratio of 26. This number means that the stock's last or closing price of 61½ or $61.50 was 26 times the company's earnings per share for the latest year.

$$\text{P-E Ratio} = \frac{\text{Last price}}{\text{Earnings per share}} = \frac{\$61.50}{\$\ 2.36} = 26$$

   Investors often use the price-earnings ratio to compare a particular company to other businesses in the same industry.

9. This column shows the **volume of shares** traded, in hundreds of shares. To compute the actual number of shares traded, you multiply the number given in this column by 100. For example, the Walt Disney Company shows the number 12713. This figure means that on this particular trading day 12713 x 100 = 1,271,300 shares of the company's stock were traded.

10. These two columns report the **highest and lowest prices** paid for the stock on this particular trading day. For example, the highest price for a share of American Telephone and Telegraph stock was 66½ or $66.50. The lowest price was 65½ or $65.50.

11. The **close** (or closing price) shows the price of a share of stock in its last trade at the close of the market on this particular day. The last price paid for a share of Disney on this trading day was 59⅝ or $59.62.

12. This column reports any **change in a stock's price**. This number in this column is the difference between the last price of a stock on this particular trading day and the last price on the previous day. For example, a share of Coca-Cola stock decreased by $3. This change means that the last price of $74.25 on this trading day (Dec. 21) was $3 lower than the last price of the stock on the prior trading day of Dec. 20.

ACTIVITY 2
READING A STOCK PAGE

Name ______________________ **Date** ______________________

Instructions: Use the stock table below to answer each of the following questions.

New York Stock Exchange Composite Transactions
Tues., Dec. 20, 1995

52 Weeks					Yld		Vol				Net
Hi	**Lo**	**Stock**	**Sym**	**Div**	**%**	**PE**	**100s**	**Hi**	**Lo**	**Close**	**Chg**
58¾	33⅞	PepsiCo	PEP	.80	1.4	24	14546	57⅛	55¾	57⅛	+ ¼
40¼	25¼	PerkElmer	PKN	.68	1.8	28	1901	38	37	37⅞	+ 1
13½	10⅛	PerkFamR	PFR	1.30	10.8	11	235	12⅛	11⅞	12	+ ⅛
4¾	3	PermRltyTr	PBT	.25e	8.0		338	3⅛	3	3⅛	
14⅛	11	PrsnlGpAm	PGA				151	13⅜	13	13⅜	+ ⅛
4⅞	2⅝	PetrieStrs	PST	c			409	2¾	2⅝	2½	
5¾	4¼	PtroCan1st					693	5½	5⅜	5⅜	
29⅜	24⅝	♣ PeteRes	PEO	2.09e	7.5		53	28	27¾	27⅞	
66⅝	37¼	♣ Pfizer	PFE	1.04	1.6	26	13256	64⅛	62⅞	63¼	– 1¼
13⅛	7⅛	PharmRes	PRX			39	369	7⅝	7¼	7⅜	+ ⅛
39½	20¼	PharmUpjhn	PNU	.27p			23618	39	37⅞	39	+ ¾
70½	51⅞	PhelpsD	PD	1.80	2.8	7	7763	64	61⅛	63⅜	+ 2¼
20⅜	17⅜	PhilaSub	PSC	1.16	5.7	14	85	20¼	20⅛	20¼	+ ⅛
94⅜	55¾	PhilipMor	MO	4.00	4.5	14	27687	90¾	88¾	89⅞	– 1⅜
77½	48¼	PhilLongD	PHI	.18e	.3		412	54⅛	52¼	54⅛	+ 1½
68⅝	48	PhilLongD pf		4.12	7.9		260	52⅜	51½	52⅜	+ 1⅜
53⅞	29⅛	PhilipsNV	PHG	.80e	2.3		10235	35¼	34⅛	35⅛	– ½
27¼	25	PhilpsGas pfA		2.33	8.8		24	26⅝	26⅜	26⅜	– ⅛
37⅛	29⅞	PhillipsPete	P	1.22	3.7	17	5242	33⅜	32¾	33	
18	9⅛	PhillipsVanH	PVH	.15	1.6	41	2624	9⅝	9¼	9½	– ⅛
13¼	6	PhoenxDuf	DUF	.20b	2.9	5	3786	6⅞	6⅞	6⅞	
n 25¾	**24⅜**	**PhnxDuff pf**			...	...	**8**	**25**	**24⅞**	**25**	...
n 24⅛	12¼	PhysnRes	PRG				22	22⅜	22	22⅜	+ ⅜
10⅞	7⅝	PicdlyCafe	PIC	.48	4.9	23	41	10	9¾	9⅞	– ⅛
24¾	18¼	♣ PiedmontNG	PNY	1.10	4.5	17	186	24¾	23⅝	24½	+ ¾
▲ 11¾	7⅜	Pier 1	PIR	.16f	1.4	20	1708	11⅞	11⅝	11¾	

1. What is the stock symbol for Pier 1? ______________________
2. How many shares of PerkElmer were traded on December 20, 1995? ______________________
3. What is the P-E ratio for PepsiCo? ______________________
4. How much higher is PepsiCo today than it was at its low for the past 52 weeks? ______________________
5. Which stock has the highest yield? ______________________
6. Which stock has the highest P-E ratio? ______________________
7. What was today's closing price for PhilipMor? ______________________
8. What was yesterday's (Mon., Dec. 19) closing price for Pfizer? ______________________
9. How much would you have to pay for 500 shares of PepsiCo stock at today's closing price? ______________________
10. Which three companies have preferred stock? ______________________
11. If you bought 100 shares of PhilipsNV at the lowest price of the year and sold it at the highest price for the year, how much capital gain would you make? ______________________

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ACTIVITY 3
THE SCAVENGER HUNT

Name ______________________ **Date** ______________________

Instructions: Use the financial tables of a daily newspaper to answer each of the questions below.

1. The stock prices in your newspaper are from the previous day. So the stock prices in the newspaper you are using now are actually for what day? ______________________

2. There are three major stock markets in the United States, two of which are located in New York City. What are the names of the three different stock markets? If your newspaper lists only their abbreviated names, write those down and ask your teacher to write the full names on the chalkboard. ______________________

3. Complete the following table by finding each stock in the stock tables of your newspaper.

Stock Name	Stock Market	Abbreviated Name of the Company
Apple Computer		
International Business Machines		
Hasbro, Inc.		
Coca-Cola		

4. Identify a company that has both common and preferred stock listed in the stock tables. ______

5. Identify a company whose stock was split during the last 52 weeks. ______________________

6. Find the stock listing for Hershey Foods. Answer the following questions:
   a. What is the abbreviation listed in your paper? ______________________
   b. What was the highest price paid for this stock during the last year? ______________________
   c. What was the dividend paid for each share of Hershey's stock? ______________________
   d. How many shares of Hershey's stock were traded? ______________________
   e. What was the highest price paid for Hershey's stock on this trading day? ______________________
   f. What was the lowest price paid for Hershey's stock on this trading day? ______________________
   g. How much did the closing price of Hershey's stock change from the day before? __________

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ACTIVITY 1 (CONTINUED)

7. Besides listing stocks, most newspapers also present various tables and other information that relate to the stock markets. For example, newspapers often summarize events in the stock markets by showing the number of shares traded in each stock market. They also show the most actively traded stocks in the three stock markets. Find these tables and answer the following questions:

   a. How many shares of stock were traded on the New York Stock Exchange on this trading day? ____________________

   b. Which stock was the most actively traded stock on the American Stock Exchange on this trading day? ____________________

8. How do you think a newspaper stock table can help when you play *The Stock Market Game?* ____________________

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LESSON 8
HOW DO YOU MAKE OR LOSE MONEY IN THE STOCK MARKET?

INTRODUCTION

Students calculate the gains and losses earned by buyers of stocks.

ECONOMICS BACKGROUND

Students learn that buyers of stock may gain or lose through stock market transactions. Buyers of stock gain when the money received from the sale of a stock is greater than their original purchase price. Buyers of stock lose when the money received from the sale of stock is less than their original purchase price. Buyers of stock recognize that there is a risk—a chance of losing money.

LANGUAGE OF ECONOMICS

Commission: The fee a broker and/or stockbroker collects for helping people buy and sell a stock.

Gain: An increase above the original purchase price in the money received from the sale of a stock.

Loss: A decrease from the original purchase price in the money received from the sale of a stock.

Price (of a stock): Amount agreed on between a buyer and a seller to exchange a stock certificate.

Risk: The chance of losing money. Risk is the opposite of safety.

CROSS CURRICULUM SKILLS

Students interpret a line graph, apply percents to problem situations, use computation to solve problems, compute with integers, compute percents, and use equivalent forms of fractions and decimals in problem situations.

OBJECTIVES

1. Students explain how buy and sell transactions determine gain or loss.

2. Students calculate *The Stock Market Game* transactions to determine gain or loss.

3. Students calculate percentage change in buy and sell prices.

MATERIALS

- Visuals 1, 2, 3, and 4
- Activities 1, 2, 3, 4, and 5

TIME REQUIRED

Two class periods

PROCEDURE

A. Ask students if they are familiar with the age-old advice for buyers of stock, "Buy low, sell high." Tell them that in this lesson they will learn what that advice has to do with making money (a gain) or losing money (a loss).

B. Display Visual 1, *The High and Low of It*. Ask students if a buyer of this stock would have had a gain or a loss. They need to realize that it depends on when the buyer bought the stock and when it was sold. They need information about both transactions to determine gain or loss. As the students work together to answer the questions, help them to see that prices are usually either higher or lower than the purchase price.

Answers to Visual 1,
***The High and Low of It*:**

1. If Maynard bought the stock at point A, when could he have sold it and made a gain? Why?
(*Points B, D, F, H. Because the price at each of these points is higher than at point A.*)

2. If Maynard bought the stock at point B, when could he have sold it and made a gain?
(*Point F only, as it is the only point higher than B.*)

3. If Maynard bought the stock at point A,

when could he have sold it without a gain or loss? Why?
(Points G and I, as the price at each of these points is the same as the purchase price.)

4. If Maynard bought the stock at point E, would he have a gain or loss? Why?
(Gain, as all other points are higher than E.)

5. If Maynard bought the stock at point F, would he have a gain or loss? Why?
(Loss, because there are no points higher than F.)

6. If Maynard took a loss when he sold the stock at D, when would he have bought it?
(Point B.)

7. If Maynard made a gain when he sold the stock at G, when would he have bought it?
(C or E.)

C. Reinforce the idea of *higher* or *lower than the purchase price.* If the price at which you sell the stock is higher than the price at which you bought the stock, you make a gain. If the price at which you sell the stock is lower than the price at which you bought the stock, you take a loss.

D. ✎ Tell students that calculating investors' gains and losses is a little more complicated than looking at a graph, but not much. Display Visual 2, *Calculations for Gain and Loss.* Explain the formulas; then display Visual 3, *Example—Calculations for Gain and Loss,* and work through the example. Before viewing the answer for "gain or loss?" ask students to determine whether Maynard Schweeb made a gain or took a loss. Then review the answer. If students need additional practice on the fundamental steps, before the steps are combined, distribute Activity 1, *Making and Losing $$$$ in the Stock Market.* If students are ready to perform all the steps, distribute Activity 2, *Gain or Loss Activity Sheet.* Ask students to complete the Activity sheet. Discuss the answers. If necessary, review fractions and conversion to decimals and/or use the following:

1/16 = .063
1/8 = .125
1/4 = .25
3/8 = .375
1/2 = .5
5/8 = .625
3/4 = .75
7/8 = .875

Review the answers to Activity 1, *Making and Losing $$$$ in the Stock Market.* See the answer sheet, which follows the teacher directions for this lesson.

Review the answers to Activity 2, *Gain or Loss Activity Sheet.* See the answer sheet, which follows the teacher directions for this lesson.

E. Tell students that there is another way they can judge gain or loss in stock market transactions. They can use percentages. Ask students if it is better for a stock to increase in price from $42 to $48, an increase of $6, or from $3 to $5, an increase of $2. In order to answer this question, you need to calculate the percentage change in each example.

F. ✎ Display Visual 4, *Percentage Change in Stock Price.* Explain that in order to find the percentage difference you divide the amount of change by the original price. To convert that to a percentage, you must multiply by 100. Together, work the example for Case 1, using the formula given.

G. ✎ Distribute Activity 3, *Percentage Change in Stock Price.* Before viewing Case 2, ask students to try to work this on their own. Then use Visual 4, Case 2, to confirm or correct their answers. Ask them to compare the two cases. Although the first stock, in Case 1, increased a greater number of dollars per share, the second stock, in Case 2, increased more in true value. Case 3 will demonstrate a decrease and offer another opportunity to practice figuring percentage changes. Ask students to complete the chart. Review and discuss the answers.

Review the answers to Activity 3, *Percentage*

Change in Stock Price.
See the answer sheet which follows the teacher directions for this lesson.

H. ✍ Divide the class into groups. Give each group one of the three Case Studies (A, B, or C) in Activity 4, *Investment Group Data*. Ask them to determine gain or loss for the stock purchase group. Remind them to include the broker's commission for the purchase and sale of stocks in their computations. Ask each group to report their findings.

Discuss the answers to Activity 4, *Investment Group Data*. See the answer sheet which follows the teacher directions for this lesson.

I. ✍ Distribute Activity 5, *Tracking Gain/Loss in The Stock Market Game*. Students should select three stocks that they either purchased or considered for purchase and track the changes in price for the 10 weeks of *The Stock Market Game*. For each stock, they should record the name of the stock, the number of shares, and the date and price of the stock (closing price) when it was purchased or selected during the first week. At the end of Weeks 2, 4, 6, 8, and 10, they should record the closing price, then calculate and record the current value of the stock (number of shares x current price), amount of gain or loss since Week 1, and percent gain or loss since Week 1. At the end of *The Stock Market Game*, they should complete the summary activity and determine a total gain or loss. Even if their stock is sold during the game, they can still track the price and make some judgments about its profitability.

ASSESSMENT

Multiple Choice Questions

1. Maynard bought McDonald's stock at $50 a share and sold it at $60. What was the percentage change in stock price?
   a. 20% decrease
   b. 10% increase
   c. 16.6% increase
   *d. 20% increase

2. The total cost of purchase, including the broker's commission, for 100 shares of Procter and Gamble at $25 a share is
   a. $2,500
   *b. $2,550
   c. $3,000
   d. $2,450

ESSAY

✍ Is the age-old advice to buyers of stock to "buy low, sell high" still true in today's market? Explain. (*Yes. A gain can be made if the price of the stock is higher when the stock is sold than when the stock was purchased. However, if the price is only slightly higher, the broker's commission could eliminate any gain from the sale.*)

JOURNAL

✍ Check the financial section of the newspaper each day for articles that might indicate whether a stock (or a category of stocks such as technology stocks) might increase or decrease in price. Record the stock, the direction the price of the stock might move, and the reason(s) given.

ANSWERS TO ACTIVITY 1
MAKING AND LOSING $$$$ IN THE STOCK MARKET

Part A: Determine the basic cost, broker's fee, and total cost of each of the following stock purchases.

STOCK PRICE	NUMBER OF SHARES	BASIC COST (Number of Shares × price of stock)	BROKER'S FEE (Basic Cost × .02)	TOTAL COST (Basic Cost + Broker's Fee)
$12	100	**$1,200.00**	**$24.00**	**$1,224.00**
$54	150	**$8,100.00**	**$162.00**	**$8,262.00**
$62½	300	**$18,750.00**	**$375.00**	**$19,125.00**
$7⅞	450	**$3,543.75**	**$70.88**	**$3,614.63**
$93¼	1,000	**$93,250.00**	**$1,865.00**	**$95,115.00**

Part B: Determine the proceeds from the sale, broker's fee, and amount received for each of the following stock sales.

STOCK PRICE	NUMBER OF SHARES	BASIC COST (Number of Shares × price of stock)	BROKER'S FEE (Proceeds from Sale × .02)	TOTAL COST (Proceeds from Sale − Broker's Fee)
$15	100	**$1,500.00**	**$30.00**	**$1,470.00**
$111	150	**$16,650.00**	**$333.00**	**$16,317.00**
$32⅛	300	**$9,637.50**	**$192.75**	**$9,444.75**
$76⅝	450	**$34,481.25**	**$689.63**	**$33,791.63**
$43¾	1,000	**$43,750.00**	**$875.00**	**$42,875.00**

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ANSWERS TO ACTIVITY 2
GAIN OR LOSS ACTIVITY SHEET

Determine the net gain or loss for each set of stock transactions. Remember to calculate the broker's fee (2% or .02) for both the purchase and the sale. Then determine whether the transaction yields a gain or a loss.

1. 100 shares of Amnex Inc. bought at $10 and sold at $22.

Total Cost of Purchase =

(Number of shares × price of stock)	+ broker commission	
(100 × $10)	+ (100 × $10 × .02)	
$1,000	+ ($1,000 × .02)	
$1,000	+ $20	= $1,020.00

Total Received of Sale =

(Number of shares × price of stock)	− broker commission	
(100 × $22)	− (100 × $22 × .02)	
$2,200	− ($2,200 × .02)	
$2,200	− $44	= $2,156.00

Gain or Loss? **GAIN** **Total Received − Total Cost** **$2,156 − 1,020 = $1,136**
If number is positive, it is a gain. If number is negative, it is a loss.

2. 200 shares of Kellogg bought at 55 and sold at 62.

Purchase	**$11,000 + $220 = $11,220**
Sale	**$12,400 − $248 = $12,152**
Gain or Loss	**$932.00 Gain**

3. 150 shares of Disney bought at 45½ and sold at 55⅝.

Purchase	**$6,825 + $136.50 = $6,961.50**
Sale	**$8,343.75 − $166.88 = $8,176.88**
Gain or Loss	**$1,215.38 Gain**

4. 325 shares of Reebok bought at 39⅜ and sold at 27½.

Purchase	**$12,796.88 + $255.94 = $13,052.82**
Sale	**$8,937.50 − $178.75 = $8,758.75**
Gain or Loss	**$4,294.06 Loss**

ANSWERS TO: ACTIVITY 3
PERCENTAGE CHANGE IN STOCK PRICE

$$\text{Percentage Change} = \frac{\text{The Amount of Change from the Original Price}}{\text{The Original Price}} \times 100$$

1. For example, to determine the percentage change in Case 1:

   The change from 42 to 48 is 6. Applying the formula: $6 \div 42 \times 100 = 14.3\%$

2. Case 2
   The stock increased from \$3 to \$5. What is the percentage increase? **2 ÷ 3 × 100 = 66.7%**

3. Compare Cases 1 and 2.
   Which case increased the most in dollars? **Case 1**

   Which case increased the most in true value? **Case 2**

4. Case 3
   What if the stock price went down from 42 to 35? What is the percentage decrease?
   7 ÷ 42 × 100 = 16.7%

5. For each of the following stocks, determine the amount of change in dollars, the percentage change in price, and gain or loss. In the *Change in Dollars* column and the *% Change in Price* column, use a + or − to indicate an increase (+) or decrease (−).

Stock Name	Purchase Price	Selling Price	Change in Dollars	% Change in Price	Gain or Loss
Ford Motor	27½	24¾	**−2.75**	**−10%**	**Loss**
Nike	34⅜	69⅞	**+35.50**	**+103.3%**	**Gain**
Continental Airlines	7	43½	**+36.50**	**+521.4%**	**Gain**
Wal-Mart	26⅝	22¼	**−4.38**	**−16.5%**	**Loss**
Philip Morris	70	90¼	**+20.25**	**+28.9%**	**Gain**

ANSWERS TO: ACTIVITY 4
INVESTMENT GROUP DATA

Case Study A

Determine gain or loss for this stock purchase group. Include the broker's commission for both purchase and sale of stocks in your computations. (The broker's commission is 2% or .02.) Determine the percentage change for this stock purchase group. Summarize the data and your conclusions. When you have finished, report your findings to the class.

1. Bought 1,500 shares of Motorola at 55⅝. Sold at 57½.
2. Bought 600 shares of IBM at 70¼. Sold at 85.
3. Bought 250 shares of Chrysler at 38⅜. Sold at 49½.
4. Bought 500 shares of RJR Nabisco at 31. Sold at 25¾.
5. Bought 1,000 shares of Smith Corona at 3⅞. Sold at ¼.

Stock	Total Cost of Purchase	Total Received of Sale	Gain	Loss
Stock 1	**$85,106.25**	**$84,525.00**		**$581.25**
Stock 2	**$42,993.00**	**$49,980.00**	**$6,987.00**	
Stock 3	**$9,785.63**	**$12,127.50**	**$2,341.87**	
Stock 4	**$15,810.00**	**$12,617.50**		**$3,192.50**
Stock 5	**$3,952.50**	**$245.00**		**$3,707.50**
Totals	**$157,647.38**	**$159,495.00**	**$9,328.87**	**$7,481.25**

Total gain or loss **$1,847.62 gain**

Percentage increase or decrease of total cost of purchase to total received of sale **1.2% increase**

Summary Statement

Write two or three sentences summarizing the data and your conclusions.

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ANSWERS TO: ACTIVITY 4
STOCK PURCHASE GROUP DATA

Case Study B

Determine gain or loss for this stock purchse group. Include the broker's commission for the purchase and sale of stocks in your computations. (The broker's commission is 2% or .02.) Determine the percentage change for this stock purchase group. Summarize the data and your conclusions. When you have finished, report your findings to the class.

1. Bought 300 shares of Home Depot at 50. Sold at 47¾.
2. Bought 100 shares of General Electric at 49⅝. Sold at 72.
3. Bought 250 shares of Texas Instruments at 83⅛. Sold at 51½.
4. Bought 400 shares of PepsiCo at 40⅜. Sold at 55⅞.
5. Bought 1000 shares of Merck at 39¼. Sold at 65⅝.

Stock	Total Cost of Purchase	Total Received of Sale	Gain	Loss
Stock 1	**$15,300.00**	**$14,038.50**		**$1,261.50**
Stock 2	**$5,061.75**	**$7,056.00**	**$1,994.25**	
Stock 3	**$21,196.88**	**$12,617.50**		**$8,579.38**
Stock 4	**$16,473.00**	**$21,903.00**	**$5,430.00**	
Stock 5	**$40,035.00**	**$64,312.50**	**$24,277.50**	
Totals	**$98,066.63**	**$119,927.50**	**$31,701.75**	**$9,840.88**

Total gain or loss **$21,860.87 gain**

Percentage increase or decrease of total cost of purchase to total received of sale **22.3% increase**

Summary Statement

Write two or three sentences summarizing the data and your conclusions.

ANSWERS TO: ACTIVITY 4
STOCK PURCHASE GROUP DATA

Case Study C

Determine gain or loss for this stock purchase group. Include the broker's commission for both purchase and sale of stocks in your computations. (The broker's commission is 2% or .02.) Determine the percentage change for this stock purchase group. Summarize the data and your conclusions. When you have finished, report your findings to the class.

1. Bought 250 shares of Coca-Cola at 60. Sold at 74¼.
2. Bought 300 shares of Hewlett Packard at 56⅝. Sold at 83¾.
3. Bought 600 shares of Citicorp at 64⅞. Sold at 67¼.
4. Bought 1,500 shares of AT&T at 68⅛. Sold at 64¾.
5. Bought 1,000 shares of General Motors at 53½. Sold at 42⅜.

Stock	Total Cost of Purchase	Total Received of Sale	Gain	Loss
Stock 1	**$15,300.00**	**$18,191.25**	**$2,891.25**	
Stock 2	**$17,327.25**	**$24,622.50**	**$7,295.25**	
Stock 3	**$39,703.50**	**$39,543.00**		**$160.50**
Stock 4	**$104,231.25**	**$95,182.50**		**$9,048.75**
Stock 5	**$54,570.00**	**$41,527.50**		**$13,042.50**
Totals	**$231,132.00**	**$219,066.75**	**$10,186.50**	**$22,251.75**

Total gain or loss **$12,065.25 loss**
Percentage increase or decrease of total cost of purchase to total received of sale **5.2%**

Summary Statement

Write two or three sentences summarizing the data and your conclusions.

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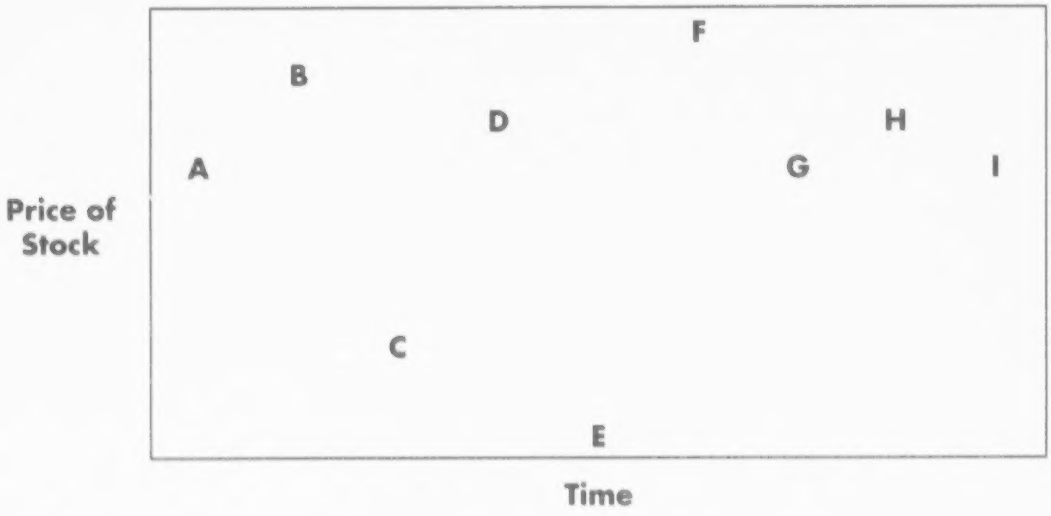
VISUAL 1
THE HIGH AND LOW OF IT



Questions:

1. If Maynard bought the stock at point A, when could he have sold it and made a gain? Why?
2. If Maynard bought the stock at point B, when could he have sold it and made a gain? Why?
3. If Maynard bought the stock at point A, when could he have sold it without a gain or loss? Why?
4. If Maynard bought the stock at point E, would he have a gain or loss? Why?
5. If Maynard bought the stock at point F, would he have a gain or loss? Why?
6. If Maynard took a loss when he sold the stock at D, when would he have bought it?
7. If Maynard made a gain when he sold the stock at G, when would he have bought it?

VISUAL 2
CALCULATIONS FOR GAIN AND LOSS

The difference between the

TOTAL COST OF PURCHASE
and
TOTAL RECEIVED OF SALE
is
THE GAIN OR LOSS

In order to calculate the total cost of purchase and total received, you need to know: the number of shares, the purchase price, the sale price, and the broker's fee.

TOTAL COST OF PURCHASE =
(Number of shares × price of stock) + broker's fee

TOTAL RECEIVED OF SALE =
(Number of shares × price of stock) − broker's fee

Broker's Commission: 2% or .02 of purchase and sale
Stockbrokers charge a fee for their services. This fee is called a commission. Brokers earn a commission for each transaction (purchase or sale) they execute. Fees vary, but in *The Stock Market Game*, it is 2%.

VISUAL 3
EXAMPLE—CALCULATIONS FOR GAIN AND LOSS

The difference between the Total Cost of Purchase and Total Received of Sale is the gain or loss.

For example:
Maynard Schweeb buys 100 shares of Amnex Inc. for $10.00 and sells them at $15.00.

Total cost of purchase =
(Number of shares × price of stock) + broker's fee
(100 X $10.00) + (100 × $10 × .02)
$1,000 + ($1,000 × .02)
$1,000 + $20 = $1,020.00

Total received of sale =
(Number of shares × price of stock) − broker's fee
(100 × $15.00) − (100 × $15 × .02)
$1,500 − $30 = $1,470.00

GAIN OR LOSS? Total received − Total cost
If number is positive, it is a *gain*.
If number is negative, it is a *loss*.

For example: Total received of sale − total cost of purchase
$1,470.00 − $1,020.00 = $450.00 GAIN

VISUAL 4
PERCENTAGE CHANGE IN STOCK PRICE

$$\text{Percentage Change} = \frac{\text{The Amount of Change from the Original Price}}{\text{The Original Price}} \times 100$$

For example:

Case 1

The change from 42 to 48 is 6.

Applying the formula:

$6 \div 42 \times 100 = 14.3\%$

Case 2

The change from 3 to 5 is 2.

Applying the formula:

$2 \div 3 \times 100 = 66.7\%$

Since the number increased, the percentage change is considered a percentage increase.

Compare Case 1 and 2
Which one increased the most in dollars? **Case 1**
Which one increased the most in true value? **Case 2**

Case 3
What if the stock price went down from 42 to 35?

The change from 42 to 35 is 7.

$7 \div 42 \times 100 = 16.7\%$

Since the number decreased, the percentage change is considered a percentage decrease.

ACTIVITY 1
MAKING AND LOSING $$$$ IN THE STOCK MARKET

Name ______________________________ **Date** ______________________________

Part A: Determine the basic cost, broker's fee, and total cost of each of the following stock purchases.

STOCK PRICE	NUMBER OF SHARES	BASIC COST (Number of Shares × price of stock)	BROKER'S FEE (Basic Cost × .02)	TOTAL COST (Basic Cost + Broker's Fee)
$12	100			
$54	150			
$62½	300			
$7⅞	450			
$93¼	1,000			

Part B: Determine the proceeds from the sale, broker's fee, and amount received for each of the following stock sales.

STOCK PRICE	NUMBER OF SHARES	BASIC COST (Number of Shares × price of stock)	BROKER'S FEE (Proceeds from Sale × .02)	TOTAL COST (Proceeds from Sale − Broker's Fee)
$15	100			
$111	150			
$32⅛	300			
$76⅝	450			
$43¾	1,000			

ACTIVITY 2

GAIN OR LOSS ACTIVITY SHEET

Name ______________________ **Date** ______________________

Determine the net gain or loss for each set of stock transactions. Remember to calculate the broker's fee (2% or .02) for both the purchase and the sale. Then determine whether the transaction yields a gain or a loss.

1. 100 shares of Amnex Inc. bought at $10 and sold at $22.

Total Cost of Purchase =

(Number of shares × price of stock)	+ broker commission	
(100 × $10)	+ (100 × $10 × .02)	
$1,000	+ ($1,000 × .02)	
$1,000	+ $20	= $1,020.00

Total Received of Sale =

(Number of shares × price of stock)	− broker commission	
(100 × $22)	− (100 × $22 × .02)	
$2,200	− ($2,200 × .02)	
$2,200	− $44	= $2,156.00

Gain or Loss? ________ **Total Received − Total Cost** ______________________
If number is positive, it is a gain. If number is negative, it is a loss.

2. 200 shares of Kellogg bought at 55 and sold at 62.

Purchase ______________________
Sale ______________________
Gain or Loss ______________________

3. 150 shares of Disney bought at 45½ and sold at 55⅛.

Purchase ______________________
Sale ______________________
Gain or Loss ______________________

4. 325 shares of Reebok bought at 39⅜ and sold at 27½.

Purchase ______________________
Sale ______________________
Gain or Loss ______________________

ACTIVITY 3
PERCENTAGE CHANGE IN STOCK PRICE

Name ______________________ **Date** ______________________

$$\text{Percentage Change} = \frac{\text{The Amount of Change from the Original Price}}{\text{The Original Price}} \times 100$$

1. For example, to determine the percentage change in Case 1:

   The change from 42 to 48 is 6. Applying the formula: $6 \div 42 \times 100 = 14.3\%$

2. Case 2
   The stock increased from $3 to $5. What is the percentage increase? ______________

3. Compare Cases 1 and 2.
   Which case increased the most in dollars? ______________

   Which case increased the most in true value? ______________

4. Case 3
   What if the stock price went down from 42 to 35? What is the percentage decrease?

   ____

5. For each of the following stocks, determine the amount of change in dollars, the percentage change in price, and gain or loss. In the *Change in Dollars* column and the *% Change in Price* column, use a + or − to indicate an increase (+) or decrease (−).

Stock Name	**Purchase Price**	**Selling Price**	**Change in Dollars**	**% Change in Price**	**Gain or Loss**
Ford Motor	27½	24¾			
Nike	34⅜	69⅞			
Continental Airlines	7	43½			
Wal-Mart	26⅝	22¼			
Philip Morris	70	90¼			

ACTIVITY 4
INVESTMENT GROUP DATA

Name ______________________________ **Date** ______________________________

Case Study A

Determine gain or loss for this stock purchase group. Include the broker's commission for both purchase and sale of stocks in your computations. (The broker's commission is 2% or .02.) Determine the percentage change for this stock purchase group. Summarize the data and your conclusions. When you have finished, report your findings to the class.

1. Bought 1,500 shares of Motorola at 55⅝. Sold at 57½.
2. Bought 600 shares of IBM at 70¼. Sold at 85.
3. Bought 250 shares of Chrysler at 38⅜. Sold at 49½.
4. Bought 500 shares of RJR Nabisco at 31. Sold at 25¾.
5. Bought 1,000 shares of Smith Corona at 3⅞. Sold at ¼.

Stock	Total Cost of Purchase	Total Received of Sale	Gain	Loss
Stock 1				
Stock 2				
Stock 3				
Stock 4				
Stock 5				
Totals				

Total gain or loss ____________________

Percentage increase or decrease of total cost of purchase to total received of sale __________

Summary Statement

Write two or three sentences summarizing the data and your conclusions.

____

____

____

____

____

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ACTIVITY 4
INVESTMENT GROUP DATA

Name ____________________________ **Date** ____________________________

Case Study B

Determine gain or loss for this stock purchse group. Include the broker's commission for the purchase and sale of stocks in your computations. (The broker's commission is 2% or .02.) Determine the percentage change for this stock purchase group. Summarize the data and your conclusions. When you have finished, report your findings to the class.

1. Bought 300 shares of Home Depot at 50. Sold at 47¾.
2. Bought 100 shares of General Electric at 49⅝. Sold at 72.
3. Bought 250 shares of Texas Instruments at 83⅛. Sold at 51½.
4. Bought 400 shares of PepsiCo at 40⅜. Sold at 55⅞.
5. Bought 1000 shares of Merck at 39¼. Sold at 65⅝.

Stock	Total Cost of Purchase	Total Received of Sale	Gain	Loss
Stock 1				
Stock 2				
Stock 3				
Stock 4				
Stock 5				
Totals				

Total gain or loss ____________________

Percentage increase or decrease of total cost of purchase to total received of sale __________

Summary Statement

Write two or three sentences summarizing the data and your conclusions.

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ACTIVITY 4
INVESTMENT GROUP DATA

Name ____________________ **Date** ____________________

Case Study C

Determine gain or loss for this stock purchase group. Include the broker's commission for both purchase and sale of stocks in your computations. (The broker's commission is 2% or .02.) Determine the percentage change for this stock purchase group. Summarize the data and your conclusions. When you have finished, report your findings to the class.

1. Bought 250 shares of Coca-Cola at 60. Sold at 74¼.
2. Bought 300 shares of Hewlett Packard at 56⅝. Sold at 83¾.
3. Bought 600 shares of Citicorp at 64⅞. Sold at 67¼.
4. Bought 1,500 shares of AT&T at 68⅛. Sold at 64¾.
5. Bought 1,000 shares of General Motors at 53½. Sold at 42⅜.

Stock	**Total Cost of Purchase**	**Total Received of Sale**	**Gain**	**Loss**
Stock 1				
Stock 2				
Stock 3				
Stock 4				
Stock 5				
Totals				

Total gain or loss ____________________

Percentage increase or decrease of total cost of purchase to total received of sale __________

Summary Statement

Write two or three sentences summarizing the data and your conclusions.

ACTIVITY 5

TRACKING GAIN/LOSS IN THE STOCK MARKET GAME

Name ______________________ **Date** ______________________

Stock 1 Name of Stock ________________ Date beginning ______________________

Number of Shares ________ Closing Price ________ Value of Stock Week 1 ________

Week	Number of Shares	Closing Price	Value of Stock (number of shares × current price)	Amount of Gain or Loss Since Week 1	Percent of Gain or Loss Since Week 1
End of Week 2					
End of Week 4					
End of Week 6					
End of Week 8					
End of Week 10					

Stock 2 Name of Stock ________________ Date beginning ______________________

Number of Shares ________ Closing Price ________ Value of Stock Week 1 ________

Week	Number of Shares	Closing Price	Value of Stock (number of shares × current price)	Amount of Gain or Loss Since Week 1	Percent of Gain or Loss Since Week 1
End of Week 2					
End of Week 4					
End of Week 6					
End of Week 8					
End of Week 10					

From *Learning from the Market*, © National Council on Economic Education, New York, NY

ACTIVITY 5 (CONTINUED)

Stock 3 Name of Stock ________________ Date beginning ________________________

Number of Shares ________ Closing Price ________ Value of Stock Week 1 ________

Week	Number of Shares	Closing Price	Value of Stock (number of shares × current price)	Amount of Gain or Loss Since Week 1	Percent of Gain or Loss Since Week 1
End of Week 2					
End of Week 4					
End of Week 6					
End of Week 8					
End of Week 10					

Summary Activity

	Name of Stock	Value of Stock Week 1	Value of Stock Week 10
Stock 1			
Stock 2			
Stock 3			
Total Value of Stock			

Gain or Loss

If the total value of your stock Week 1 is greater, determine loss. (Use formula A.)

If the total value of your stock Week 10 is greater, determine gain. (Use formula B.)

A. Value Week 1 − Value Week 10 = LOSS
B. Value Week 10 − Value Week 1 = GAIN

Gain or Loss? ____________________

LESSON 9
GETTING FANCY: THE BULLS, THE BEARS, AND THE PIGS!

INTRODUCTION

In this lesson, students learn about buying on margin and selling short. The students will learn how buying on margin and selling short can increase potential gains on stock purchases, but at the risk of greater potential losses.

ECONOMICS BACKGROUND

The most important lesson in economics is that everything has a cost. This is why there is no such thing as a free lunch. When this rule is applied to buying stocks, it means the higher the expected return on a given purchase, the riskier that purchase will be. Buyers of stock must be compensated for risk.

Buying on margin and selling short are methods that can increase returns, but only by increasing risk. Buyers of stock must make choices because of scarcity. People engage in economizing behavior. They weigh the relative benefits and relative costs of each alternative and choose the one that provides them the greatest anticipated net benefits.

Buying on margin and selling short may be necessary to do well in *The Stock Market Game*. However, when buying stocks with real money, these techniques involve levels of risk that many people consider high.

LANGUAGE OF ECONOMICS

Buying on Margin: Buying stock on credit.

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Opportunity Cost: The forgone benefit of the next best alternative when scarce resources are used for one purpose rather than another.

Short Cover: The buying back of a stock originally borrowed from a broker in a short sale.

Short Sale: Sale of a stock borrowed from a broker.

CROSS CURRICULUM SKILLS

Students develop skills in listening, speaking, reading, and group participation. They use computation to solve problems; compute percents and integers to solve problems; and compute percents of increase or decrease.

OBJECTIVES

1. Students describe the difference between a bull and a bear market.

2. Students explain and illustrate the technique of buying on margin.

3. Students explain and illustrate the technique of selling short.

4. Students analyze the rewards and risks of selling short and buying on margin.

MATERIALS

- 3 chairs and a table
- A sign labeled "Brokerage Office"
- Visual 1
- Activities 1, 2, 3, and 4
- Costumes for actors (optional)

TIME REQUIRED

Two class periods

PROCEDURE

A. Display Visual 1, *The Bulls, the Bears, and the Pigs*, and tell the students that in this lesson they will learn techniques that can potentially increase their gains in bull and bear markets.

B. Using Visual 1, explain the difference between bull and bear markets.

C. Now discuss pigs. Be sure the students understand that techniques used to maximize potential gains also increase risks. An old stock market saying is, "Bulls can make money, bears can make money, but pigs seldom make money." In fact, Wall Street pigs get slaughtered.

D. Another way of getting the risk-reward idea across to students is to quote one successful stock market pro who said the secret to making money in the stock market is to not buy as low as you can and not sell as high as you can. Why would he say this?

E. ✎ Distribute copies of Activity 1, *A Marginal Play*. Tell the students that they will perform a play to show how buying on margin works. Set up the desk and three chairs and assign students the roles of Eric, Stockbroker, Jane, and Moderator. You might want to use props and/or costumes to make the play more visual. Have "The Stock Market Players" perform "A Marginal Play."

F. Debrief the play by discussing the following questions:

1. What is "buying on margin"?
   (*Buying stock on credit*)
2. When you buy on margin, how much of the purchase price must you put up?
   (*50%*)
3. Who determines the percentage?
   (*The Federal Reserve*)
4. Why do you think there is a limit on the amount of money that brokers can lend?
   (*If brokers lend too much money, losses could be great. High losses on margin accounts were one reason the stock market crashed in 1929. Stock owners received margin calls and could not meet them*)
5. What are the advantages of buying stock on margin?
   (*A stock buyer can buy more stock and make higher returns.*)
6. What are the disadvantages of buying stock on margin?
   (*Stock purchasers must pay interest on the loan, and if the stock goes down, their losses would be higher.*)

G. ✎ Distribute copies of Activity 2, *Margin Problems*, to each student. Have the students read everything down to "Margin Worksheet." Help them by explaining the examples given in the reading.

H. ✎ Ask students to work individually or in small groups to answer the questions in the three situations in the worksheet.

I. ✎ Go over the answers:

Situation 1
Mrs. Jones buys on margin 100 shares of Coca-Cola at $30 per share.

1. The total market value of the stock Mrs. Jones buys is *$3,000*.
2. The amount of money that Mrs. Jones must pay for this purchase (her initial margin requirement) is *$1,500*.
3. The maximum amount of money that a brokerage firm could lend Mrs. Jones (her debt) is *$1,500*.
4. Mrs. Jones's equity is *$1,500*.

Situation 2
The value of Mrs. Jones's shares of Coca-Cola rises to $40 per share.

1. The market value of Coca-Cola in Mrs. Jones's account is now *$4,000*.
2. The amount of money she owes the brokerage firm (her debt) is *$1,500*.
3. Mrs. Jones's equity is *$2,500*.

Situation 3
The value of Mrs. Jones's 100 shares of Coca-Cola falls to $20 per share.

1. The market value of Coca-Cola in Mrs. Jones's account is now *$2,000*.
2. The amount of money she owes the brokerage firm (her debt) is *$1,500*.
3. Mrs. Jones's equity is *$500*.

J. Tell the students that they are going to learn about an investment strategy called short selling. It is a technique some investors use to try to increase profits in a bear market.

K. Distribute copies of Activity 3, *Get Shorty: A Stock Market Play*, to each student.

L. Assign students to the role of Moderator, Stockbroker, Eric, and Jane. Have them act out the play in front of the class.

M. Debrief the play by discussing the following questions:

1. How would you define a "short sale"?
(*Sale of stock borrowed from a broker; it is borrowed with the intent of purchasing it later and returning it.*)

2. Why is a short sale the reverse of the usual stock trade?
(*In a normal trade, you buy the stock first and sell it later. In a short sale, you sell borrowed stock first and buy it later.*)

3. What is a "short cover"?
(*Buying back stock originally borrowed from the broker in a short sale.*)

4. Why do people sell stock short?
(*They hope to sell the borrowed stock at a high price and buy it back later at a lower price. They can then return it to the broker and make a gain.*)

5. Why might the price of stock drop?
(*The economy might be doing poorly, a company might be having financial trouble, or there might be negative news about the company or industry.*)

6. Why is selling short so risky?
(*If the price of stock goes up, the short seller has to buy the stock back at a higher price. There is no limit to how high the stock price can rise.*)

7. What costs are involved in selling short?
(*Short sellers must pay a broker's fee when they sell short and when they short cover. Although it is not mentioned in the play, the short seller must also pay to the broker any dividends, declared in cash or stock, on the stock sold short. Depending on the level of the class, you may or may not want to discuss these costs of selling short.*)

8. Why must an investor open a margin account with at least 50% of the value of the short sale in the account?
(*To protect the broker who is lending the stock. If the price of the stock rises too much, the short seller might not be able to buy back the stock and return it.*)

N. ✎ Now distribute a copy of Activity 4, *Short Sale Problems*, to each student.

O. ✎ Show students how to answer Situation 1.

Situation 1
A stock owner sells short 200 shares of a stock at $50 per share. He buys them back for replacement (short covers) at $40 per share. Did he make a gain or loss? *Gain*. How much? *$1,640*.

Short sale (200 x $500)	$10,000
Broker's fee	− 200
Proceeds	$ 9,800
Short cover (200 x $40)	$ 8,000
Broker's fee	+ 160
Cost	$ 8,160

Proceeds from short sale ($9,800) −
Cost of short cover ($8,160) =
Gain ($1,640)

P. Have the students work individually or in small groups to answer the questions in the next three situations.

Situation 2
A stock owner sells short 100 shares of XYZ corporation at $20 per share and has to short cover them at $40. Did she make a gain or loss? *Loss*. How much? *$2,120*.

Short sale (100 x $20)	$ 2,000
Broker's fee	− 40
Proceeds	$ 1,960
Short cover (100 x $40)	$ 4,000
Broker's fee	+ 80
Cost	$ 4,080

Proceeds from short sale ($1,960) −
Cost of short cover ($4,080) =
Loss ($2,120)

Situation 3
A stock owner short sells 100 shares of Apple Pie Corporation at $50 per share. The initial margin requirement is 50%. How much money must be deposited in the margin account? *$2,500* ($5,000 × .5)

Situation 4
The Stock Market Game requires that the equity in a portfolio must be equal to 30% of the market value of the short sale. How much equity is needed in the portfolio if $5,000 worth of stock is sold short? *$1,500* ($5,000 × .3).

CLOSURE

Display Visual 1, *The Bulls, the Bears, and the Pigs,* and ask:

A. How can bullish stock buyers increase their gains or returns?
(By buying on margin)

B. How can bearish stock buyers increase their gains or returns?
(By selling short)

C. Why do most stock buyers avoid buying on margin or selling short?
(These techniques are risky and can result in large losses.)

ASSESSMENT

Multiple Choice Questions

1. What does it mean to "sell short"?
   a. Using a short broker
   *b. Selling stock you don't own
   c. Buying stock on credit
   d. Selling stock you own that you believe will go down in price

2. If a stock buyer buys on margin, what does she think will happen to the price of the stock?
   *a. The price will increase quickly.
   b. The price will increase slowly.
   c. The price will decrease quickly.
   d. The stock will trade within a narrow price range.

✍ PRACTICE

✍ You sell 100 shares of Technofear, Inc., short at $50 per share. Four months later, you short cover it for $10. The brokerage firm receives 2% on the short sale and 2% on the short cover. How much gain will you earn on this transaction? Show your work.

Proceeds from sale	$5,000
− 2 % commission	− 100
− Cost of short cover	− 1,000
− 2% commission	− 20
Net gain	$3,880

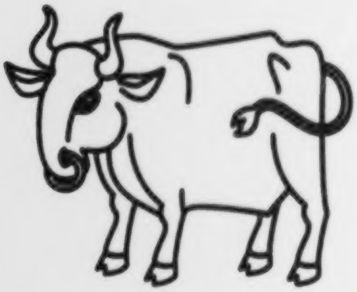
✍ You buy $10,000 of Crawdaddy Fish Stores stock on 50% margin. The price falls 10%. How much equity do you have in the stock? By what percentage has your equity increased or decreased?

Current value of stock	$9,000
Debt owned by broker	$5,000
Equity	$4,000

$$\text{\% decrease in equity} = \$5{,}000 - \$4{,}000 = \frac{\$1{,}000}{\$5{,}000} = 20\% \text{ loss}$$

Choose a stock that you think would be particularly suited for a short sale or to buy on margin. Then write a short essay in which you state and explain your decision.

VISUAL 1
THE BULLS, THE BEARS, AND THE PIGS



THE BULLS

A bull market is a stock market with rising prices over an extended time. Buying on margin can increase gains in a bull market.

THE BEARS

A bear market is a stock market with falling prices over an extended period of time.
Selling short can increase gains in a bear market.

THE PIGS

A pig is a greedy animal.
Stock buyers who try to make every last cent of gain on an investment may end up with losses.

ACTIVITY 1
A MARGINAL PLAY

Name ______________________ **Date** ______________________

Stockbroker, Jane, and Eric are sitting around a desk near the sign labeled "Brokerage Office." The Moderator is standing in front of the classroom.

ERIC: Last year the Dow Jones Average was up 30%. I think this year looks just as good. The bull market is roaring. How can I make the most of this?

STOCKBROKER: First, buy quality companies. Secondly, remember that stocks also go down.

JANE: Eric, you're sounding like a pig, and pigs don't always make money.

ERIC: No, I just want to take full advantage of a bull market.

MODERATOR: Jane and Eric are about to learn how buying on margin can increase their returns on their stock purchases as well as their risks.

JANE: What exactly is "buying on margin"?

STOCKBROKER: Buying on margin is buying stock on credit. It's similar to borrowing money to buy a car or a house. Only instead of borrowing to buy goods and services, you borrow to buy more stock.

ERIC: Could you give us an example of buying on margin?

STOCKBROKER: Suppose a person wants to buy 100 shares of a stock at $100 per share for a total cost of $10,000. Unfortunately, the person has only $5,000. She could still buy these 100 shares by borrowing money from a brokerage company. Borrowing money from a brokerage company in order to buy stock is called buying stock on margin.

JANE: Can you borrow as much money as you want?

STOCKBROKER: Actually, you can borrow only up to 50% or one-half of the money needed to buy the stock. This is true for all brokerage firms. The limit is set by the Federal Reserve System, which has the authority to determine this margin requirement.

MODERATOR: The Federal Reserve System is the central bank that regulates all banks and many other financial institutions in the United States. If you're cool, you just call it "the Fed."

ERIC: How do we begin to buy on margin?

STOCKBROKER: In order to buy stocks on margin, the stock buyer must set up a margin account in a brokerage office. A margin account is an account that allows a buyer to buy stock on credit.

ACTIVITY 1 (CONTINUED)

JANE: Don't brokerage firms worry that stock buyers won't pay back the money they have borrowed?

STOCKBROKER: Brokerage firms limit their risk by requiring collateral. Collateral consists of shares of stock or cash that can be used to repay the loan.

MODERATOR: Whenever an individual borrows large sums of money in the real world, the lender often asks for collateral. Collateral is something of value that a borrower uses as a promise to repay the loan. The borrower signs a legal agreement allowing the lender to take the collateral if the loan isn't repaid. A house is often signed over as collateral for a mortgage loan. A car is often used as collateral for a car loan. In a margin account, cash and stocks already owned are held as collateral by the brokerage firm for loans made to buy stock.

ERIC: Do brokerage firms charge anything for this service?

STOCKBROKER: In addition to the fee for buying and selling the stock, the brokerage firm charges interest on the loan. The interest would be deducted from your account.

JANE: What happens if the value of the stock you purchased on margin goes down?

STOCKBROKER: Then the value of your account goes down. If it goes down enough, you may have to put up more collateral. This is called a margin call. If you can't meet this margin call, your stock will be sold.

MODERATOR: We have seen that by borrowing the money to buy stock, stock buyers can increase their gains if the stock rises. However, if the stock falls, stock buyers can lose a greater proportion of their money than if they just paid cash for the stock.

ACTIVITY 2
MARGIN PROBLEMS

Name ______________________________ **Date** ______________________________

The amount of collateral that the investor must deposit to open a margin account to buy stock is called the *initial margin requirement*. The initial margin requirement must be 50% (one-half) of the total value of the stocks being purchased or sold short. This means that to make a $10,000 stock purchase on margin, the investor must put $5,000 worth of collateral into the margin account.

The actual amount of ownership the investor has in the account is called the *equity*. It is determined by subtracting the debt (what is owed the brokerage firm) from the value of the stock (what is owned). The following is a sample margin account:

Current value of stock purchased	$10,000
Debt (money owed to broker)	– 5,000
Equity (amount owned by investor)	5,000

Suppose the price of stock increases. The market value of the stock will rise, and so will the equity.

Current value of stock	$11,000
Debt	– 5,000
Equity	6,000

Suppose the price of the stock falls. The market value of the stock will fall, and so will the equity.

Current value of stock	$9,000
Debt	– 5,000
Equity	4,000

The Stock Market Game also allows you to buy stock on margin. In the *Game*, the computer will act as your broker and lend you part of the money needed to buy stock. Since the initial margin requirement in the game is 50%, you can borrow up to one-half of the value of the stocks being purchased or sold short. This means that in the beginning of the *Game* you may buy approximately $200,000 worth of stock (less the broker's fees). One hundred thousand dollars will come from your beginning cash balance, and the *Game* will lend you $100,000. In this case, you have borrowed the greatest amount possible because of the 50% margin requirement ($200,000 worth of stock x 50% [.5] = $100,000 loan). The *Game* would "hold" your $200,000 worth of stock as collateral (security) for the $100,000 loan.

Of course, you do not have to spend all of your cash ($100,000) the first time that you buy stock. However, when you are buying stocks in *The Stock Market Game*, you may eventually spend all of your cash ($100,000) and need a loan. If you reach a point where you have zero cash, the *Game* will automatically lend you money.

On your portfolio report, the "ending balance" shows whether you have borrowed money to buy stock. If the ending balance is less than zero (a negative number), then you have a margin loan. It will be equal to the amount shown. You would have to pay interest on that amount (your margin loan). The interest on your loan is deducted from your opening balance each week. (The *Player's Manual* explains how the interest is calculated on margin accounts.)

Now see if you understand this by completing the problems on the next page.

ACTIVITY 2 (CONTINUED)

Margin Worksheet

Instructions: Read each situation below and fill in the blanks.

Situation 1

Mrs. Jones buys on margin 100 shares of Coca-Cola at $30 per share.

1. The total market value of the stock Mrs. Jones buys is $________.
2. The amount of money that Mrs. Jones must pay for this purchase (her initial margin requirement) is $________.
3. The maximum amount of money that the brokerage firm could lend Mrs. Jones (her debt) is $________.
4. Mrs. Jones's equity is $________.

Situation 2

The value of Mrs. Jones's 100 shares of Coca-Cola rises to $40 per share. Calculate the following:

1. The market value of Coca-Cola in Mrs. Jones's account is now $________.
2. The amount of money she owes the brokerage firm (her debt) is $________.
3. Mrs. Jones's equity is $________.

Situation 3

The value of Mrs. Jones's 100 shares of Coca-Cola falls to $20 per share. Calculate the following:

1. The market value of Coca-Cola in Mrs. Jones's account is now $________.
2. The amount of money she owes the brokerage firm (her debt) is $________.
3. Mrs. Jones's equity is $________.

ACTIVITY 3
GET SHORTY: A STOCK MARKET PLAY

Name ______________________________ **Date** ______________________________

Stockbroker, Jane, and Eric are sitting around a desk near the sign labeled "Brokerage Office." The Moderator is standing in front of the classroom.

JANE: Hi, friendly office stockbroker. That stock you helped me buy last year has really done well. This is my brother, Eric. He's also interested in buying stock. [*Eric shakes hands with Stockbroker.*]

ERIC: We've heard there is a way to make money when the price of stock goes down. Is this really possible? I think we're going into a bear market.

STOCKBROKER: Yes, definitely. It's a strategy called "selling short." But it's very risky. Are you sure you're interested? Remember, pigs don't often make money.

ERIC: I'm game. Give us the short stuff.

STOCKBROKER: Selling short reverses the regular way you buy and sell stock. In a normal trade, you buy stock first and sell later, just as Jane did when she bought PepsiCo last year. Selling short, however, means that you sell stock first and buy it back later.

JANE: Sounds really weird. How can you sell stock that you don't own?

MODERATOR: Jane, like many other buyers of stocks, is confused. Perhaps the Stockbroker can make this process clearer to you and Jane.

STOCKBROKER: Let me continue. As you said, Jane, selling short means selling stock you don't already own. Investors can do this simply by borrowing stock from a broker. Brokerage companies have a large number of stocks that they are holding for customers or that they own themselves. They are willing to lend these shares of stock to buyers of stock who are interested in selling short.

ERIC: Do the short sellers get to keep the money from the short sale?

STOCKBROKER: No way! We stockbrokers aren't that crazy. Stock owners who sell short must later buy back the stock and return it to the broker. The broker is only lending the stock for the sale. The broker holds the money collected from the sale of the stock as "collateral" (or security) on the loan of the stock shares.

MODERATOR: When the stock buyer buys back the stock to return it to the broker, it is called a "short cover."

JANE: Well, if they don't get to keep the money, why would the stock buyer want to sell borrowed stock?

ACTIVITY 3 (CONTINUED)

STOCKBROKER: That's an easy one to answer. Stock owners sell short only when they think the price of a stock will fall. Short sellers must later buy back the stock and return it to the brokerage company, which is a short cover. Eventually, they must cover their shorts. They hope they can buy it back at a lower price.

ERIC: So if I decided to short sell 100 shares of PepsiCo, your firm would lend me the stock. You would sell it for me tomorrow at, say, $40. You would hold the $4,000 in my account until I decide to buy back the PepsiCo.

JANE: And if the price of PepsiCo falls to $30, then Eric could replace the borrowed stock at the lower price of $3,000 and make a gain of $1,000.

MODERATOR: The broker would use the $4,000 Eric received for the original short sale to buy back the stock (or the short cover). Since only $3,000 is needed to buy back the stock, Eric made a gain of $1,000.

ERIC: But what happens if the price goes up?

STOCKBROKER: You're in trouble. Of course, if the price goes up, you must replace the shares at the higher price. This would cost you money. That's why selling short is so risky. There is no limit on how high the price can go.

MODERATOR: If the price of PepsiCo goes up to $50 per share, Eric would have to buy it back (or short cover) for $5,000. Since Eric already had $4,000 in his account from the short sale, he would have to come up with an additional $1,000 to buy back the stock. In this case, Eric would lose money.

JANE: Obviously, you would only want to sell stock short if you thought the price was going to go down.

ERIC: I have heard of several companies that are not doing so well lately. I think maybe their stock prices just might go down. Would you be willing to help me choose stocks to short sell? I know I need a broker to complete the trades involved.

STOCKBROKER: Of course. However, I must tell you about the costs involved. Our company charges a fee for all short sales and short covers. The fees are determined by how much the stock sold short or short covered is worth.

MODERATOR: The broker's fee is called a commission. It is charged on all transactions: buys, sales, short sales, and short covers.

JANE: You mean that Eric would pay you a commission on the short sale and again on the short cover. That's what I did when I bought Disney stock first and sold it later.

STOCKBROKER: Since you two seem to understand this so well, I'd like to explain one more thing about selling short. A short seller must open a margin account with at least 50% of the value of the short sale in the account. You may use cash to open this account, but we won't pay you interest on it.

ACTIVITY 3 (CONTINUED)

MODERATOR: The margin account is required by the Federal Reserve Board. It is a way of protecting brokerage firms. If the price of stock sold short goes up too much, too fast, the short seller may not be able to buy it back to return it to the brokerage company.

ERIC: Thank you so much for your time. I'll go home and do some research and call you next week.

JANE: Yes, thanks. I learned a lot, but short selling isn't for me. I'll stick to the regular way of buying and selling stock.

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ACTIVITY 4
SHORT SALE PROBLEMS

Name ______________________________ **Date** ______________________________

Instructions: Read each situation below and fill in the blanks. Be sure to include the cost of the broker's fee in your calculations. The broker's fee is 2% for the short sale and 2% for the short cover. Show your work in the space provided.

Situation 1
A stock owner sells short 200 shares of a stock at $50 per share. He buys them back for replacement (short covers) at $40 per share. Did he make a gain or loss? ________
How much? ________

Situation 2
A stock owner sells short 100 shares of XYZ Corporation at $20 per share and has to short cover them at $40. Did she make a gain or loss? ________
How much? ________

Situation 3
A stock owner sells short 100 shares of Apple Pie Corporation at $50 per share. The initial margin requirement is 50%. How much money must be deposited in the margin account? ________

Situation 4
The Stock Market Game requires that the equity in a portfolio must be equal to 30% of the market value of the short sale. How much equity is needed in the portfolio if $5,000 worth of stock is sold short? ________

LESSON 10
ARE STOCK MARKETS ONLY FOR THE WEALTHY?

INTRODUCTION

In this lesson, the students learn about widespread participation in the securities markets. They graph data about the characteristics of the people who place their savings in the securities markets.

ECONOMICS BACKGROUND

Savers have many alternative ways to use their savings. Many savers decide to use their savings to purchase stocks. Share ownership is widespread in the U.S. economy. About 51 million people own stocks directly or indirectly. Over half of all shareholders have family incomes between $25,000 and $75,000. For these individuals, the anticipated benefits of share ownership are worth the anticipated costs.

LANGUAGE OF ECONOMICS

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Incentive: A benefit offered to encourage people to behave in a certain way.

CROSS CURRICULUM SKILLS

Students develop writing and speaking skills. They construct a bar graph and interpret and analyze graphs.

OBJECTIVES

1. Students recognize that share ownership is widespread in the U.S. economy.

2. Students recognize that placing savings in the stock market is an economic decision influenced by powerful incentives.

MATERIALS

◆ Visuals 1, 2, 3, 4, and 5
◆ Activity 1

TIME REQUIRED

One class period

PROCEDURE

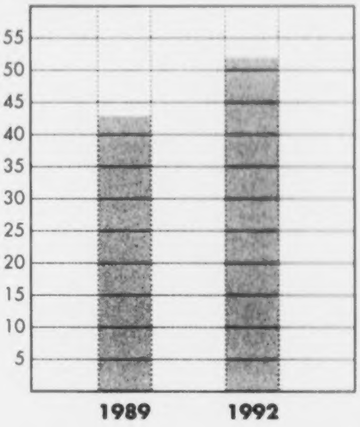
A. Explain to the students that the purpose of this lesson is to help them learn about people who invest in the securities markets.

B. Display Visual 1, *The Rich People Mystery*, covering the bottom half. Invite the students to speculate on reasons that information about the stock market is so often in the news. Display the lower half of Visual 1.

C. Distribute Activity 1, *Who Owns American Business?* to the class. After reading the instructions, ask the class to complete the graph. Ask:

1. What appears to be the change in individual share ownership in the United States? (*Share ownership increased between 1989 and 1992.*)

2. Based on these numbers, why so you think news about the securities markets is reported so often? (*Millions of Americans participate in the stock markets through ownership of stocks. Apparently, people believe that the benefits of owning stocks outweigh the costs. Anticipated gains in the value of their stocks encourage people to act in this fashion. It is not surprising that they would like news each day about how the stock markets are performing.*)



D. Display Visual 2, *Income and Share Ownership*. After the students have examined the statistics, ask:

1. What percentage of shareholders make less than $25,000? (*14.8%*)
2. What percentage of shareholders make between $25,000 and $74,999? (*55.2%*)
3. What percentage of shareholders have family incomes of $75,000 or more? (*30%*)
4. What conclusion can you draw about share ownership and income? (*Many middle-income people own shares.*)

E. Display Visual 3, *Education and Share Ownership*. After the students have examined the statistics, ask:

1. What percentage of shareholders have four or more years of high school education? (*94.7%*.)
2. What appears to be the relationship betweeen share ownership and level of education? (*The vast majority of shareholders have at least high school diplomas.*)

F. Display Visual 4, *Age and Share Ownership*. After the students have examined the statistics, ask:

What conclusion can you draw about share ownership and age? (*As age increases until 65, share ownership increases.*)

G. Display Visual 5, *Why Do People Purchase Shares?* After the students have examined the statistics, ask: Why does it appear that so many Americans purchase shares? (*The students will note that purchases of common stock have a favorable return when compared to the alternatives. Explain that people have many choices regarding how to use their savings. They base their choices on an assessment of the costs and the benefits involved. Buying stocks provides a potential means of long-term wealth accumulation. Gaining wealth is an important incentive that encourages widespread participation in the stock markets.*)

CLOSURE

Review the key point of the lesson. Ask:

How widespread is share ownership in the United States? (*Share ownership is widespread. About one-third of the adult population owns stock, and share ownership is increasing.*)

Who tends to own stock? (*People of middle income, high school education or higher, and people between ages 35 to 65.*)

Why do so many people participate in the stock markets? (*Gains on corporate shares are higher on average, compared to returns from other forms of saving.*)

ASSESSMENT

Multiple Choice Questions

1. Which of the following groups has the largest percentage of share ownership?
   a. High school dropouts
   b. People with 1-3 years of college
   *c. People with 4 years of college
   d. People with postgraduate work

2. Which of the following groups has the largest percentage of share ownership?
   a. Family income of less than $15,000
   *b. Family income of $25,000-$50,000
   c. Family income of $75,000-$100,000
   d. Family income of over $100,000

ESSAY

✍ It is often thought that people who are interested in the stock markets are mainly wealthy people—not poor or middle class. Is this true? What factors are associated with share ownership? (*Share ownership is largely associated with people of middle income. Share ownership is associated with age and level of education. Share ownership increases with years of college and age, until age 65.*)

JOURNAL

✍ According to Teenage Research Limited, about 17 percent of youths aged 2-19 own stocks or bonds. Interview a student in your school who owns stock. How did she or he acquire the stock? Why does she or he keep the stock? Why does she or he plan to sell? Record the interview results in your journal.

VISUAL 1

THE RICH PEOPLE MYSTERY

Why do we hear so much about the stock markets when everyone knows that the stock markets are only for the wealthy—not the young, poor, or middle class?

REALITY

It is a myth that the stock markets are only for the wealthy. In reality, the rich, the middle class, and even some poor people place savings in stock markets.

VISUAL 2
INCOME AND SHARE OWNERSHIP

Family Income of Adult Shareowners, 1992

Household Income	Percent of Total
Under $15,000	5.3
$15,000–25,000	9.5
$25,000–50,000	29.6
$50,000–75,000	25.6
$75,000–100,000	11.9
$100,000 and Over	18.1

Questions for Discussion

1. What percentage of shareholders make less than $25,000?
2. What percentage of shareholders make between $25,000 and $74,999?
3. What percentage of shareholders have family incomes of $75,000 or more?
4. What conclusion can you draw about share ownership and income?

VISUAL 3
EDUCATION AND SHARE OWNERSHIP

Adult Shareholders by Highest Level of Education, 1992

Education Category	Percent of Shareowners
Less than Four Years of High School	5.4
Four Years of High School	24.8
0-3 Years of College	24.8
4 Years of College	25.2
Postgraduate Work	19.9

Questions for Discussion

1. What percentage of shareholders have four or more years of high school education?
2. What appears to be the relationship between share ownership and level of education?

VISUAL 4
AGE AND SHARE OWNERSHIP

Age Distribution of Adult Shareholders, 1992

Age	Percent of Shareowners
21-34	21.7
35-44	27.0
45-64	36.9
Over 65	14.4

Question for Discussion

What conclusion can you draw about ownership and age?

VISUAL 5
WHY DO PEOPLE PURCHASE SHARES?

Returns from Investing, 1995

	Common Stocks	Treasury Bills	Long-Term Bonds
Percentage Return on Investment Since 1926	9.9%	3.8%	4.8%

Question for Discussion

Why does it appear that so many Americans purchase shares?

ACTIVITY 1
WHO OWNS AMERICAN BUSINESS?

Name ______________________ **Date** ______________________

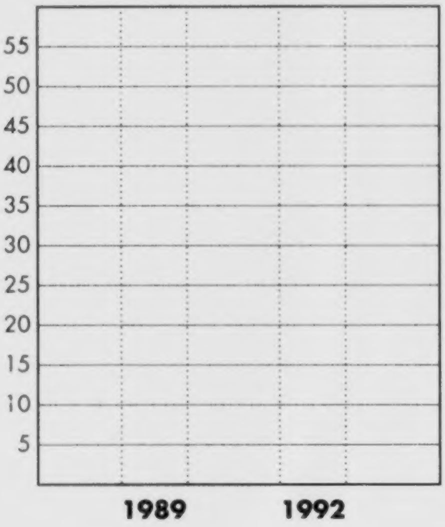
Each day, radio, television, and newspaper reporters announce what kind of a day it has been on Wall Street. They quote the latest Dow Jones Average and speculate about whether the stock markets will go up or down. Why is information about the stock markets so often in the news? After all, only a few wealthy Americans really care! Or, could interest in the stock markets be more widespread?

One way to answer this question is to examine data in a report issued by the New York Stock Exchange on the number of people who own shares in companies. The following table shows the number of people in the United States who own shares in American businesses. This includes people who hold stock directly through mutual funds and individual retirement accounts, and indirectly through pension plans.

On the next column, create a bar graph by darkening in the columns to reflect the data in the table. Then answer the questions for discussion.

Table 1

YEARS	MILLIONS OF AMERICANS
1989	42.9
1992	51.3



Questions for Discussion

1. What appears to be the change in individual share ownership in the United States?

2. Based on these numbers, why do you think news about the securities markets is reported so often?

LESSON 11

GETTING RICH IS CHILD'S PLAY— THE NEWS ABOUT COMPOUND INTEREST

INTRODUCTION

Students use mathematics and construct a spreadsheet to learn how compounding and time of investment are related to the accumulation of wealth.

ECONOMICS BACKGROUND

Students learn that interest/return compounds the growth of savings/investments, but the choice to invest has an opportunity cost because it requires the investor to give up something else. Compounding provides an incentive to early investing as the returns (the benefits) increase in greater proportion than the costs.

LANGUAGE OF ECONOMICS

Compound Interest: Money earned on your original deposit and on the interest payments you have received on that deposit in the past.

Cost: Cost is often expressed in dollars, but true cost is the second-best alternative people give up when they make a choice. The best alternative is the one selected. Cost is often called *opportunity cost* to emphasize the opportunity given up.

Interest: The amount paid for borrowing someone else's money. This amount is usually expressed as an annual percentage. It is calculated by dividing the amount of interest paid in one year by the amount borrowed.

Return: The amount earned on one's savings or investment. This amount is usually expressed as a yearly percentage.

Saving: Setting aside some of today's income for future spending.

Savings Account: A bank account that pays interest on the money deposited.

CROSS CURRICULUM SKILLS

Students examine and compute exponential growth in problem situations, use a calculator constant to compute exponential growth and compound interest, use a computer spreadsheet, and compute with percents to solve problems.

OBJECTIVES

1. Students calculate investment accumulations for various interest rates and lengths of investment.

2. Students perform calculator constant operations.

3. Students construct a spreadsheet to establish data for analysis.

4. Students analyze data established through computations to reach conclusions.

5. Students compare early and later investment strategies and identify the incentives and opportunity cost of each.

6. Students predict the relationship of early investment to total financial accumulation.

MATERIALS

- Visual 1
- Activities 1*, 2, 3, and 4
- Calculators or computers

TIME REQUIRED

Three class periods

PROCEDURE

A. Display Visual 1, *The Chessboard of Financial Life*. Place a penny on one of the corner squares. Ask students if, given a choice, they would take $10,000 in cold cash **OR** the amount resulting from the penny in the corner doubled on the next square, and that amount doubled on the next square, and so on, until each square has been used. Use corn kernels or pennies to do the first few so they get the idea (2, 4, 8, 16, 32, 64, etc.). Ask the students to explain their choices.

B. ✎ Next, ask the students to use calculators to

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*Adapted from *Bank One Money and Banking Middle School Curriculum* (1993). Milwaukee, Wisconsin.

continue calculating the amount on the chessboard. On basic calculators, they would enter 2 × .01 = .02. Instruct them to continue hitting the = key; that will double the amount each time. Simply count as you hit the key each time. (The key sequence is sometimes reversed for scientific calculators, .01 × 2 =, or the K key must be used. Check the instructions for the calculators your students are using.) Record the amount on the transparency or on the board. In the very short run you could continue to use corn kernels so that students will see the visual effects of compounding. Before long, however, you will run out of space as corn quantity increases. By the 21st square, students will have $10,485.76. Most basic calculators will display an error E in the upper millions in square 34. A scientific calculator will take you all the way to the end (the 64th square) and display the result in scientific notation—9.2 E16.

C. Tell the students that the continual multiplying that turned this penny into hundreds, then thousands, then millions, billions, trillions, and beyond, is called compounding. Explain that compounding is important to savers. For each dollar saved in a savings account, the bank pays interest. This interest is added to the principal, the amount originally saved; then additional interest is paid on both. This compound interest makes money grow much faster. Eventually, money will double, as pennies or corn did on this chessboard. How long it takes depends on the interest rate.

D. ✎ Distribute Activity 1, *Double Your Money*. Tell students that this lesson will teach them the importance of compounding on investment and why getting rich is sometimes called child's play. Read the introduction to Part 1 together; then do one or more computations to make sure the students understand how to fill in the remaining columns. Then direct them to complete Part 1, a and b.

E. ✎ When they have completed a and b, ask them to use the calculator constant operation to check their answers in the balance column. They would enter 1.06 × 1000======. Again, they would count each time they hit the = key.

F. ✎ Then tell the students that there is an easier way to determine how long it will take for money to double. It is called the *Rule of 72*. Simply divide your interest rate into 72 to get the number of years it will take for money to double. Do the first question (a) in Part 2 together (72 ÷ 6 = 12). This answer should be the same as the answer for question 1.b. Ask students to complete Part 2, b and c. Again, ask them to use their calculator's constant operation to check their answers for Part 2, b and c. For example, in b: at 4% interest, press 1.04 × 1000=== etc. until you hit 18; 5%, 1.05 × 1000===, etc. until you hit 14. For example, in c: 5 years 14.4, 1.144 X 1000===, and so on, until you hit 5 years. Each press of the = key is another year.

G. Summarize: the longer the deposit is in the bank, the more money it will make.

H. Tell students that they can use the same strategy of compounding when investing in the stock market. If you know about compounding, you'll understand why investing money early in one's life may result in a considerable accumulation of wealth even if the amounts invested are not large.

I. ✎ Distribute Activity 2, *The When and What of Compounding, but Mostly the When*. Read the introduction and the two case studies. Ask students to complete the exercise using Activity 3, *The When and What... Spreadsheet*, for their computations. Explain that 10% interest is used because that was the average yearly return from investment in common stocks from 1925 to 1992. Use one of the following options to complete the Activity:

1. Students can use their calculators to compute the interest and totals for each year. In order to reduce the amount of number crunching, the exercise can be divided among individuals or groups. Simply give them the starting numbers from which to compute. For example, if students in group

X knows the accumulation for Age 44 for Investor A, they can calculate the interest and accumulation for Age 45.

2. Students can construct a spreadsheet. Listed are directions for constructing a spreadsheet using Claris Works 3.0, but the spreadsheet can be done a variety of ways. Encourage students to develop their own formulas. Have them express or write these formulas in words first. For example, take the investment in cell X and add it to the total investment for the year before in cell Y, then add.... This will help them see the connection between columns and understand the function the computer is performing.

J. When the students have finished, help them make judgments about the data they developed. Which one was the wiser investor? Discuss their answers and conclusions. Encourage them to consider the opportunity cost of each investor. What costs and benefits

Directions to create the spreadsheet for Claris Works Version 3.0:

To enter data or headings: Land the cursor on the cell you want to enter data into and click the mouse button. You will need to look at the far upper left side of the sheet next to the x I √. This is where you actually enter data after selecting a cell.

To Select Cells: Hold the mouse key down on the cell you wish to start with and drag it to the cell you wish to end with.

To Fill Down: After having selected the cells (which should be highlighted after selecting), you will need to go to the menu bar item "Calculate" and hold down the mouse to select "Fill Down."

To Fill Right: Do the same as "Fill Down" but select "Fill Right."

CELL	
C2+F2	Land the cursor on C2 and type "Investor A." You can spread this out by pressing the space bar between each letter.
A3	Land the cursor on A3 and enter "AGE." Press Return to accept it.
A5	Land the cursor on A5 and type 21.
A6	Land the cursor on A6 and type the formula as you see it on the spreadsheet. Then highlight cell A6-A49 and **Fill Down**.
B3	Land the cursor on B3 and type "Interest." Press Return and type "per year."
B5	Land the cursor on B5 and type .10 for 10%. Go to the menu bar and select **Format**: Number: Percent: Precision 0. Press Return and then **select the cells** from B5 to B49 and **Fill Down**.
C3	Do the same as A3 except type "Invested."
C5	Land the cursor on C5 and type 0. Go to the menu bar and select **Format**: Number: Currency: Precision 2. **Select cells** C5-H5 and **Fill Right**. This will fill in $0.00 across the page to cell H5.
C6	Same as C5 but enter 2000. You then need to **Select cells** C6-C17 and **Fill Down**.
D3	Land the cursor on D3 and enter "Interest" and press Return. Enter "earned" and press Return.
E3-H3	Enter these as you did A3. (G3 is like B3.)
D6	Enter the formula = (C6+E5)* B6. **Fill Down** to D49.
E6	Enter the formula = E5+D6+C6. **Fill Down** to E49.
F6	Land your cursor on F5 and **Fill Down** to Cell F17.
G6	Enter the formula = (H5+F6)* B6. **Fill Down** to G49.
H6	Enter the formula = H5+F6+G6. **Fill Down** to H49
C18	Enter 0 and then go to **Format**: Number: Currency: Precision 2. **Fill Down** to cell C49.
F18	Same as what you did for cell C18, but enter 2000. **Fill Down** to F49.

would students have to weigh when deciding whether or not to save? Reinforce the idea that money grows; money makes money if it is wisely invested; but investors *can* lose money, too. The best time to start is when you are young, because then the money you invest has more time to grow. It's child's play.

CLOSURE

✍ Distribute Activity 4, *Do I Have a Deal for You!* and pose the question. Students should be suspicious of this, given the lesson, and argue that the effects of compounding are more important than the given amounts. The calculator constant operation is the same as it was in the initial exercise, 2 × .01 = = = = =. According to the second offer, their daily pay will rise from one cent to about $5 by the 10th day of work—still way below the $50 per day they could have earned otherwise. But on the 20th day, their daily pay will soar to over $5,000, and on the 30th day, they will get more than $5,000,000.

Summarize: How money compounds depends on the amount invested, the rate of return, and the amount of time invested. Your decision about saving, however, does involve an opportunity cost.

ASSESSMENT

Multiple Choice Questions

1. Compound interest affects wealth accumulation by
   a. providing an incentive to wait and invest later in life.
   *b. making money grow on its own.
   c. allowing investors to ignore their financial assets.
   d. providing incentives to spend.

2. Complete this advice. It isn't just what you save, but ...
   a. how much.
   b. when you start.
   c. for how long.
   *d. all of these.

ESSAY

✍ What difference does it make whether investors begin saving and investing early or late in life? Discuss this question. Use the concepts of *opportunity cost* and *incentives* to help develop your discussion. (*Early investment means fewer contributions are necessary as compared to later investing. That is because compounding of interest makes money for you. Both early and later investors incur an opportunity cost for the money they invest—their next best alternative—but the early investor invests less for more return. Thus, the incentives for early investment are much greater than for later investment.*)

JOURNAL

✍ Try the example of the chessboard or the summer job out on your friends and relatives. Which would they choose and why? Record their answers and reasons.

ANSWERS TO ACTIVITY 1
DOUBLE YOUR MONEY

Part 1

a. Imagine that you have earned $1,000 through a paper route, jobs for the neighbors, gifts, allowances, etc., and that you deposited this money in a savings account that pays 6% interest. The first year it will pay $60 (1,000 × .06 = 60). The next year you will have $1,060 on deposit. How much will you have in the years that follow? Complete the columns below.

End of Year	Amount on Deposit	Interest Rate	Interest Earned	Balance
1.	1,000.00	6	60.00	1,060.00
2.	1,060.00	**6**	**63.60**	**1,123.60**
3.	**1,123.60**	**6**	**67.42**	**1,191.02**
4.	**1,191.02**	**6**	**71.46**	**1,262.48**
5.	**1,262.48**	**6**	**75.75**	**1,338.23**
6.	**1,338.23**	**6**	**80.29**	**1,418.52**
7.	**1,418.52**	**6**	**85.11**	**1,503.63**
8.	**1,503.63**	**6**	**90.22**	**1,593.85**
9.	**1,593.85**	**6**	**95.63**	**1,689.48**
10.	**1,689.48**	**6**	**101.37**	**1,790.85**
11.	**1,790.85**	**6**	**107.45**	**1,898.30**
12.	**1,898.30**	**6**	**113.90**	**2,012.20**
13.	**2,012.20**	**6**	**120.73**	**2,132.93**

b. How many years did it take to double your money? **12**

Part 2

Rule of 72: $\frac{72}{\text{Interest Rate}}$ = number of years it will take for money to double

Use the Rule of 72 to answer the following questions.

a. Check your answer to Part 1, b.

72 ÷ 6 = 12 This answer should be the same as your answer for Part 1 b. If it isn't, check your math for both questions.

ANSWERS TO ACTIVITY 1 (CONTINUED)

b. How many years would it take money to double at each of these interest rates?

4% **18 yrs.** (72 ÷ 4 = 18)
7% **10.3 yrs.** (72 ÷ 7 = 10.3)
8% **9 yrs.** (72 ÷ 8 = 9)
10% **7.2 yrs.** (72 ÷ 10 = 7.2)
13% **5.5 yrs.** (72 ÷ 13 = 5.5)
15% **4.8 yrs.** (72 ÷ 4 = 18)

c. Reverse the formula.

$$\frac{72}{\text{Number of years it will take money to double}} = \text{Interest Rate}$$

At what interest rate would your money double?

In 3 years **24%** (72 ÷ 3 = 14.4)
In 5 years **14.4%** (72 ÷ 5 = 14.4)
In 10 years **7.2%** (72 ÷ 10 = 7.2)
In 20 years **3.6%** (72 ÷ 20 = 3.6)

ANSWERS TO ACTIVITY 2
THE WHEN AND WHAT OF COMPOUNDING, BUT MOSTLY THE WHEN

1. How much money did each person invest?
(A: $24,000; B: $64,000.)

2. What was the total wealth accumulation of each?
(A: $993,306.59; B: $442,503.09.)

3. How much longer would it take for A to become a millionaire?
(One more year.)

4. At age 45, investors A and B had invested the same amount of money, $24,000. What was the end-of-year accumulation for A? for B?
(End of year accumulation for A: $147,648.69; for B: $47,045.42.)

5. What did it "cost" Investor A to invest?
(The $2,000 she contributed every year for 12 years for a total of $24,000 *and* all she had to give up during that 12-year period. Her next best alternative for each $2,000 was her opportunity cost: probably a better car, a nicer apartment, a larger wardrobe, etc.)

6. What did it "cost" Investor B to invest?
($64,000 *and* everything he had to give up during his 32 years of investing. His next best alternative for each $2,000 was his opportunity cost.)

7. What is as important as the amount invested and amount of time. Why?
(How *early* the money is invested and how long it is left to accumulate, because that will determine how much wealth accumulates. Even a small amount will grow large if left to compound over a long period of time.)

8. What are the incentives for early investment?
(Early investment means fewer contributions are necessary as compared to later investing. Compounding of interest makes money for you. [Point out that at some point the earned return is a significantly larger amount than the $2,000 contribution.])

9. What might be an opportunity cost for early investment?
(Investor A gave up owning a nicer car in order to save more. Investor B purchased a nicer car but gave up the potential benefits of early saving.)

10. What conclusions can you draw from this exercise?
(The earlier and longer money is saved, the more money it makes. It is better to invest early and put it to work than to invest later and try to catch up. Although A only invested $24,000, her return was greater than the return for B, who invested $64,000. But greater saving itself involves an opportunity cost.)

11. So, is getting rich child's play? Explain.
(It can be. You can't make money unless you save money. When you begin is sometimes more important than how much you put in. The earlier one saves, the greater the opportunity for wealth accumulation.)

ANSWERS TO ACTIVITY 3
THE WHEN AND WHAT... SPREADSHEET

	A	B	C	D	E	F	G	H
2				Investor A			Investor B	
3	AGE	Interest	Invested	Interest	Total saved	Invested	Interest	Total saved
4		per year		earned			earned	
5	21	10%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	22	10%	$2,000.00	$200.00	$2,200.00	$0.00	$0.00	$0.00
7	23	10%	$2,000.00	$420.00	$4,620.00	$0.00	$0.00	$0.00
8	24	10%	$2,000.00	$662.00	$7,282.00	$0.00	$0.00	$0.00
9	25	10%	$2,000.00	$928.20	$10,210.20	$0.00	$0.00	$0.00
10	26	10%	$2,000.00	$1,221.02	$13,431.22	$0.00	$0.00	$0.00
11	27	10%	$2,000.00	$1,543.12	$16,974.34	$0.00	$0.00	$0.00
12	28	10%	$2,000.00	$1,897.43	$20,871.78	$0.00	$0.00	$0.00
13	29	10%	$2,000.00	$2,287.18	$25,158.95	$0.00	$0.00	$0.00
14	30	10%	$2,000.00	$2,715.90	$29,874.85	$0.00	$0.00	$0.00
15	31	10%	$2,000.00	$3,187.48	$35,062.33	$0.00	$0.00	$0.00
16	32	10%	$2,000.00	$3,706.23	$40,768.57	$0.00	$0.00	$0.00
17	33	10%	$2,000.00	$4,276.86	$47,045.42	$0.00	$0.00	$0.00
18	34	10%	$0.00	$4,704.54	$51,749.97	$2,000.00	$200.00	$2,200.00
19	35	10%	$0.00	$5,175.00	$56,924.96	$2,000.00	$420.00	$4,620.00
20	36	10%	$0.00	$5,692.50	$62,617.46	$2,000.00	$662.00	$7,282.00
21	37	10%	$0.00	$6,261.75	$68,879.21	$2,000.00	$928.20	$10,210.20
22	38	10%	$0.00	$6,887.92	$75,767.13	$2,000.00	$1,221.02	$13,431.22
23	39	10%	$0.00	$7,576.71	$83,343.84	$2,000.00	$1,543.12	$16,974.34
24	40	10%	$0.00	$8,334.38	$91,678.22	$2,000.00	$1,897.43	$20,871.78
25	41	10%	$0.00	$9,167.82	$100,846.05	$2,000.00	$2,2287.18	$25,158.95
26	42	10%	$0.00	$10,084.60	$110,930.65	$2,000.00	$2,715.90	$29,874.85
27	43	10%	$0.00	$11,093.06	$122,023.71	$2,000.00	$3,187.48	$35,062.33
28	44	10%	$0.00	$12,202.37	$134,226.09	$2,000.00	$3,706.23	$40,768.57
29	45	10%	$0.00	$13,422.61	$147,648.69	$2,000.00	$4,276.86	$47,045.42
30	46	10%	$0.00	$14,764.87	$162,413.56	$2,000.00	$4,904.54	$53,949.97
31	47	10%	$0.00	$16,241.36	$178,654.92	$2,000.00	$5,595.00	$61,544.96
32	48	10%	$0.00	$17,865.49	$196,520.41	$2,000.00	$6,354.50	$69,899.46
33	49	10%	$0.00	$19,652.04	$216,172.45	$2,000.00	$7,189.95	$79,089.41
34	50	10%	$0.00	$21,617.25	$237,789.70	$2,000.00	$8,108.94	$89,198.35
35	51	10%	$0.00	$23,778.97	$261,568.67	$2,000.00	$9,119.83	$100,318.18
36	52	10%	$0.00	$26,156.87	$287,725.54	$2,000.00	$10,231.82	$112,550.00
37	53	10%	$0.00	$28,772.55	$316,498.09	$2,000.00	$11,455.00	$126,005.00
38	54	10%	$0.00	$31,649.81	$348,147.90	$2,000.00	$12,800.50	$140,805.50
39	55	10%	$0.00	$34,814.79	$382,962.69	$2,000.00	$14,280.55	$157,086.05
40	56	10%	$0.00	$38,296.27	$421,258.96	$2,000.00	$15,908.60	$174,994.65
41	57	10%	$0.00	$42,125.90	$463,384.85	$2,000.00	$17,699.47	$194,694.12
42	58	10%	$0.00	$46,338.49	$509,723.34	$2,000.00	$19,669.41	$216,363.53
43	59	10%	$0.00	$50,972.33	$560,695.67	$2,000.00	$21,836.35	$240,199.88
44	60	10%	$0.00	$56,069.57	$616,765.24	$2,000.00	$24,219.99	$266,419.87
45	61	10%	$0.00	$61,676.52	$678,441.76	$2,000.00	$26,841.99	$295,261.86
46	62	10%	$0.00	$67,844.18	$746,285.94	$2,000.00	$29,726.19	$326,988.05
47	63	10%	$0.00	$74,628.59	$820,914.53	$2,000.00	$32,898.80	$361,886.85
48	64	10%	$0.00	$82,091.45	$903,005.99	$2,000.00	$36,388.68	$400,275.53
49	65	10%	$0.00	$90,300.60	$993,306.59	$2,000.00	$40,227.55	$442,503.09

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ANSWERS TO ACTIVITY 4
DO I HAVE A DEAL FOR YOU!

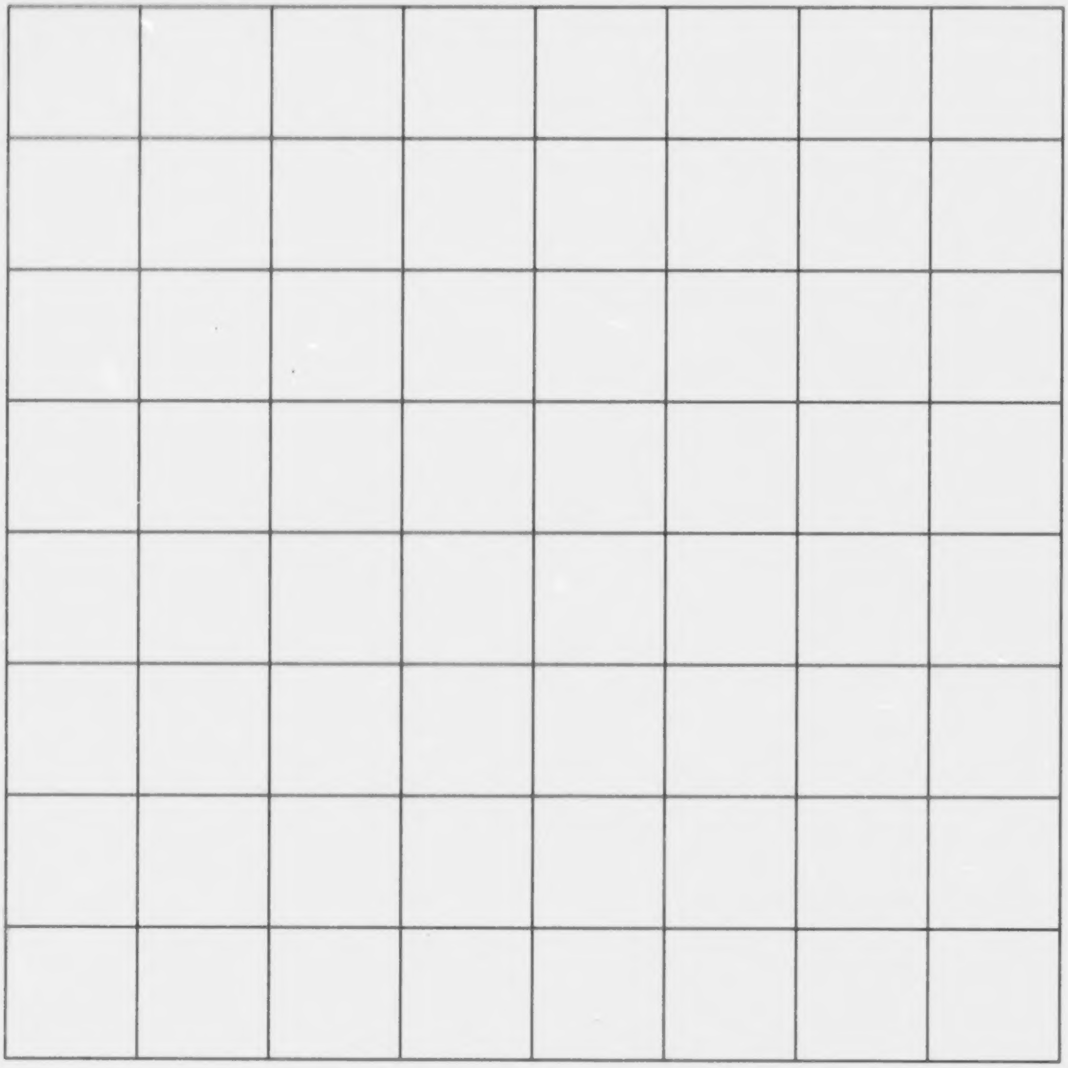
1. Which offer would you take and why?
   (The second offer, because it would involve much more money.)

2. If you took the offer of $50 a day, and you worked all the days, how much would you earn?
   ($2,500.)

3. If you took the second offer, how many days would you have to work to earn more in one day than you'd earn for the entire summer if you took the first offer?
   (19 days.)
   How much more?
   ($121.44.)

4. If you took the second offer and worked only half of the summer, what would you make on the last day?
   ($167,772.16.)

VISUAL 1
THE CHESSBOARD OF FINANCIAL LIFE



ACTIVITY 1
DOUBLE YOUR MONEY

Part 1

a. Imagine that you have earned $1,000 through a paper route, jobs for the neighbors, gifts, allowances, etc., and that you deposited this money in a savings account that pays 6% interest. The first year it will pay $60 (1,000 × .06 = 60). The next year you will have $1,060 on deposit. How much will you have in the years that follow? Complete the columns below.

End of Year	Amount on Deposit	Interest Rate	Interest Earned	Balance
1.	1,000.00	6	60.00	1,060.00
2.	1,060.00			
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				

b. How many years did it take to double your money? ________

Part 2

Rule of 72: $\frac{72}{\text{Interest Rate}}$ = number of years it will take for money to double

Use the Rule of 72 to answer the following questions.

a. Check your answer to Part 1, b.

72 ÷ 6 = 12 This answer should be the same as your answer for Part 1 b. If it isn't, check your math for both questions.

ACTIVITY 1 (CONTINUED)

b. How many years would it take money to double at each of these interest rates?

4% ________ 7% ________ 8% ________ 10% ________ 13% ________

15% ________

c. Reverse the formula. $\dfrac{72}{\text{Number of years it will take money to double}} = \text{Interest Rate}$

At what interest rate would your money double?

In 3 years ________ In 5 years ________ In 10 years ________

In 20 years ________

ACTIVITY 2

THE WHEN AND WHAT OF COMPOUNDING, BUT MOSTLY THE WHEN

Name ______________________________ **Date** ______________________________

You can use compounding to make your money work for you in the stock market. Economist Bill Dickneider explains this type of compounding to *The Stock Market Game* participants in his *In The News!* publications. "Besides putting money in banks, people use their savings to buy financial assets like stocks, bonds, mutual funds, and insurance. These different ways of saving offer a wide range of risk and return. For example, common stocks provided an average yearly return of about 10 percent from 1925 to 1992. Corporate bonds had an average annual return of a little over 5 percent over that time. And short-term government securities, called Treasury bills, had an average yearly return of under 4 percent. Of course, there is no guarantee that these types of saving will have similar returns in the future. Still, these past averages show some of the different returns (and risks) available to savers who want a chance to compound their money."

The following are two case studies of people who saved and invested. We will assume that each invested in common stocks earning an average of 10% a year. (Remember, in the real world, this amount will vary, and there are no guarantees unless the amount is placed in a guaranteed interest account like a Treasury bill.) Your mathematical mission is to find out which one was the wiser investor. To do so, you may use the calculator constant operation or create a spreadsheet. Your mathematical skills will come in handy here, but you also need to look for another factor that has a great deal to do with the financial accumulation totals.

Investor A started investing when she was 22, right out of college. Saving involves an opportunity cost—the best alternative given up. It wasn't easy to invest $2,000 a year then, what with her student loan to pay off and other new financial responsibilities such as finding a decent place to live and a car to get to her new job. But she was determined to save because her grandmother always said that it wasn't what you make, but what you save, that determines your wealth. So, reluctantly, she gave up buying that new car and renting a really nice apartment, and she invested $2,000 a year. After 12 years, she got tired of the sacrifice, yearning for a brand new red sports car and other luxuries. She didn't touch the money she had already invested, because she wanted to be sure she would have money for retirement when she reached age 65. But she quit investing and hit the malls.

Investor B didn't start investing until he was 34. He also graduated from college at 22, but he had done without many things in college and now that he had an income, he wanted them. He bought a new car, and a very nice wardrobe, and took some wonderful trips. But spending his current income involved an opportunity cost. By the time he was 34, he was married, had many responsibilities, and decided he'd better start saving and planning for his financial future. He had also heard that it isn't what you have earned, but what you have saved that determines your wealth. He figured he had 25 to 30 productive years left in his career, so, with new determination, he saved $2,000 a year for the next 32 years, until he retired at age 65.

Was A or B the wiser investor? Complete your computations, using Activity 3, *The When and What... Spreadsheet*, to find out; then write out answers to the questions below.

1. How much money did each person invest?

   A ______________ B ______________

2. What was the total wealth accumulation of each?

   A ______________ B ______________

ACTIVITY 2 (CONTINUED)

3. How much longer would it take for A to become a millionaire?

4. At age 45, investor A and B had invested the same amount of money, $24,000. What was the end-of-year accumulation for A? __________ for B? __________

5. What did it "cost" Investor A to invest? ______________________________

6. What did it "cost" Investor B to invest? ______________________________

7. What is as important as the amount invested and amount of time invested. Why? __________
____

8. What are the incentives for early investment? ______________________________
____

9. What might be an opportunity cost for early investment? ______________________________
____

10. What conclusions can you draw from this exercise? ______________________________
____

11. So, is getting rich child's play? Explain. ______________________________
____

ACTIVITY 3

THE WHEN AND WHAT... SPREADSHEET

Name ______________________ **Date** ______________________

Use a calculator or computer to complete your computations.

	A	B	C	D	E	F	G	H
2			Investor A			Investor B		
3	AGE	Interest	Invested	Interest	Total saved	Invested	Interest	Total saved
4		per year		earned			earned	
5	21	10%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	22	10%	$2,000.00	$200.00	$2,200.00	$0.00	$0.00	$0.00
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18			$0.00			$2,000.00		
19								
20								
21								
22								
23								
24								

ACTIVITY 3 (CONTINUED)

	A	B	C	D	E	F	G	H
2			Investor A			Investor B		
3	AGE	Interest	Invested	Interest	Total saved	Invested	Interest	Total saved
4		per year		earned			earned	
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

ACTIVITY 4
DO I HAVE A DEAL FOR YOU!

Name ______________________ **Date** ______________________

You go in for a summer job interview. The boss offers to pay you $50 a day for a 5-day, 10-week position **OR** you can earn only one cent on the first day but have your daily wage doubled every additional day you work. Which option would you take?

Use the calculator to do the computations required to answer the questions.

1. Which offer would you take and why? ______________________
2. If you took the offer of $50 a day, and you worked all the days, how much would you earn? ______________________
3. If you took the second offer, how many days would you have to work to earn more in one day than you would earn in the entire summer if you took the first offer? How much more? ______________________
4. If you took the second offer and worked only half the summer, what would you make on the last day? ______________________

Application Assignment

5. Write an offer to a parent about your allowance, using the idea of compounding. Be prepared to demonstrate the effects of compounding with a calculator constant operation. Write a summary of your presentation. RULE: It isn't fair to trick your parent, so even if they unwisely (because they do not understand the power of compounding) agree to give you millions, instead of a measly couple of bucks you get now, this ISN'T a real deal.

LESSON 12

ALL SAVINGS CHOICES INVOLVE RISK: GRANDMA'S GIFT

INTRODUCTION

In this lesson, students learn that all savings choices involve risk . Students evaluate various alternatives for saving money.

ECONOMICS BACKGROUND

Saving means setting aside some of today's income for future use. Various forms of savings allow people to earn money on their savings. However, all savings choices involve costs and benefits. There are no risk-free decisions about savings.

LANGUAGE OF ECONOMICS

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits among the alternatives.

Risk: The chance of losing money. Risk is the opposite of safety.

CROSS CURRICULUM SKILLS

Students develop skills in writing, speaking, and problem solving.

OBJECTIVE

Students explain the advantages and disadvantages of savings alternatives, using the criteria of safety, reward, ease of getting cash, and ease of opening an account.

MATERIALS

◆ Visual 1
◆ Activities 1* and 2

TIME REQUIRED

One class period

PROCEDURE

A. Explain to the students that in this lesson they will study the advantages and disadvantages of various forms of savings. Imagine that you just received $1,000 from your grandmother. She tells you that the money is yours to keep, but you may not spend it for at least two years. Ask: What are some ways in which you might save Grandma's gift?
(Accept a variety of responses. Students might mention such alternatives as placing the $1,000 in a piggy bank, savings account, or checking account.)

B. Explain that there is no way to be completely sure that you will have the gift available to you in the future. Any decision you make involves a risk. The question is what level of risk you wish to take.

C. Display Visual 1, *No Risk-Free Decisions*. Ask the class to name the costs and benefits of saving the $1,000 in a piggy bank or a savings account. Their analysis might look like this:

	Benefits	**Costs**
Piggy Bank	•You know where it is •Easy to get to	•No interest is earned •Might be lost or taken from your room
Savings Account	•Safe in your account •Earn some interest	•Low interest rate •Harder to get to

D. Explain to the class that their task is to decide how best to use Grandma's gift. Distribute Activity 1, *Grandma's Great Gift*. Explain how to use the rating symbols of *high*, *moderate*, and *low* by using the example of the mattress.

E. Divide the class into five groups. Assign two types of saving to each group. Explain that each group should present its alternative uses for saving to the class, explain the benefits and costs of each choice considering safety, reward, ease of getting cash, and ease of opening the account, and then recommend how to use Grandma's gift. Invite each group to make its presentations.

F. Explain to the class that their task now is to give advice to others who are facing saving decisions. Distribute Activity 2, *The $5,000 Question*. Reassign the students to their five groups and assign each group one case from Activity 2.

---

*Activity 1 is adapted from *The Stock Market Game Guide*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc., and used here used with permission.

G. Discuss the group recommendations for each case in Activity 2. Here are the suggested answers:

Case 1
Jerry wants his savings for emergencies, so he should look for low risk and ease of getting his cash back whenever he wants it. Alternative 1 meets both of these objectives, so Jerry should put his money in a savings account or money market account or divide his savings between the two.

Case 2
Rachel earns a high income and is interested in saving for retirement. Since she will not retire for several years, she might want to consider placing the $5,000 in Alternative 3 because of the greater risk and the greater reward.

Case 3
Elaine does not want to lose the $5,000 because she wants to buy a home. She plans to make the purchase in a few years, so she is not concerned about having quick access to her cash. Alternative 2 is her best alternative, since its risk is lower than the risk for Alternative 3 and its rewards are higher than the rewards for Alternative 1.

Case 4
George and Monica earn high incomes. They can take some risk with the $5,000. In addition, their oldest child will not be ready for college for ten years. They do not need to worry much about getting their cash back for some time. They might want Alternative 3 because of the greater reward and the greater possible return.

Case 5
Joey and Phoebe do not want to lose the $5,000, because of their plans to buy a town house and have children. They plan to make these changes in a few years, so they do not need quick access to their cash. Alternative 2 is their best alternative, since its risk is lower than the risk for Alternative 3 and its rewards are higher than the rewards for Alternative 1.

CLOSURE

Review the key points of the lesson. Ask:

What are savings alternatives that tend to provide safety of cash?
(Regular savings account, money market account, certificate of deposit)

What are savings alternatives that tend to reward taking risks?
(Corporate bonds and stocks)

ASSESSMENT

Multiple Choice Questions

1. Which form of savings is considered to be the safest?
   a. Stock
   b. Bonds
   *c. Treasury Bills
   d. Junk Bonds

2. A key advantage of buying stocks and bonds is
   a. safety.
   *b. reward.
   c. unlimited liability.
   d. ease of opening an account.

ESSAY

✍ Rachel earns $40,000 per year working as an accountant. She is 35 years old and married, with one young child. Her husband Tom currently stays at home to look after their child. Rachel and Tom have inherited $5,000 that they plan to save. How would you suggest they use the $5,000? Rachel and Tom have just read about the increasing cost of college tuition and can't sleep nights.
(Since their child will not be ready for college for several years and they are very worried about saving for college, they might want to place their savings in stocks or bonds or some combination because of the greater possible return.)

✍ Imagine that you did receive $1,000 as a gift from your grandmother. If saving the money is your best choice, what type of saving alternative would you consider? What would be the advantages of the alternative you selected? What would be the disadvantages? Why is this combination of advantages and disadvantages right for you?

VISUAL 1

NO RISK-FREE DECISIONS

	Benefits	Costs
Piggy Bank		
Savings Account		

ACTIVITY 1
GRANDMA'S GREAT GIFT

Name ______________________________ **Date** ______________________________

Your grandmother has given you a gift of $1,000. However, there is one condition on the use of the money. You may not spend the money immediately. It must be set aside today for spending some time in the future. Your task today is to decide how to use the $1,000.

Your groups will be assigned two saving alternatives. After you have studied the alternatives, do the following:

1. Present the alternative uses for saving to the class.
2. Explain the advantages and disadvantages of each choice, considering safety, reward, ease of getting cash, and ease of opening the account.
3. Tell how your group wishes to use the gift.

Each type of savings listed below is rated according to the following criteria:

1. Safety
2. Reward
3. Ease of getting your cash back
4. Ease of opening up an account, which relates to the amount of money you need to open the account.

Scale

●	◗	○
High	Moderate	Low

Type of Saving	Description	Safety	Reward	Ease of Getting Cash	Ease of Opening Account
Mattress	You could hide your money under a mattress.	○	○	●	●
Regular (Passbook) Savings Account	The Federal Deposit Insurance Corporation (FDIC) insures savings accounts for up to $100,000. Interest rates are usually lower than rates for other types of savings choices, but you can open an account with very little money. You can also withdraw your money whenever you like.	●	○	●	●
Money Market Account	The FDIC also insures these special bank accounts for up to $100,000. Your interest rates go up and down, but they are higher than those on regular savings accounts. Banks often require that you deposit $100 or more, and you can quickly get your money by writing checks or by withdrawing cash.	●	○	●	◗

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ACTIVITY 1 (CONTINUED)

Type of Saving	Description	Safety	Reward	Ease of Getting Cash	Ease of Opening Account
Certificate of Deposit (CD)	CDs are a special type of savings deposit that you must leave in the bank for a set amount of time during which you receive a fixed rate of interest. The FDIC also insures these accounts for up to $100,000. Banks usually require that you deposit at least $500. If you withdraw your money before the end of the given time, you must pay a penalty.	●	◗	○	◗
US. Government Securities	Government securities are IOUs that the government issues when it borrows money. They are very low-risk because the government guarantees them. Below are four varieties.				
Savings Bonds	You can buy savings bonds from the federal government for as little as $50. You can't sell them to other people, but you can sell them to the government whenever you want cash.	●	◗	●	●
Treasury Bills	Treasury bills are short-term IOUs that the government repays in one year or less. You can easily sell Treasury bills if you want cash. The government requires that you buy at least $10,000 worth of bills at one time.	●	◗	●	○
Treasury Notes	Treasury notes are medium-term IOUs that the government repays after one year but within 10 years. You can easily sell Treasury notes if you want cash. The government requires that you buy at least $1,000 worth each time that you make a purchase.	●	◗	●	◗

ACTIVITY 1 (CONTINUED)

Type of Saving	**Description**	Safety	Reward	Ease of Getting Cash	Ease of Opening Account
Treasury Bonds	Treasury bonds are long-term IOUs that the government repays after 10 or more years. You can easily sell Treasury bonds if you want cash, but the government also requires that you buy at least $10,000 worth.	●	◗	●	○
Corporate Bond	Corporate bonds are IOUs that corporations issue when they borrow money. Your risk of losing your money is higher than it is with other types of savings because companies can go bankrupt. You must have at least $1,000 to buy a corporate bond, but you can easily sell corporate bonds if you want cash.	◗	●	●	◗
Stock	When you buy stock, you usually take a greater risk than you would with any of the other types of savings. Your reward will vary, depending on the prices you pay for your stocks and the dividends you receive. The amount of money you must have to buy stock depends on the prices of the stocks you buy and the number of shares you want.	○	●	●	◗

ACTIVITY 2
THE $5,000 QUESTION

Name ______________________ **Date** ______________________

What follows are five case studies concerning how families or individuals might use their savings. Each has $5,000 to save. Each is considering only three alternatives:

Alternative 1 Savings account and money market account

Alternative 2 2.5 year certificate of deposit

Alternative 3 Corporate bonds or stocks

Case 1
Jerry earns $35,000 a year as a performer at comedy clubs. He is 26 years old and single. He has $2,000 in a bank account and rents an apartment. He plans to use the $5,000 for emergencies and to help pay for living expenses.

Which alternative do you recommend? ______________________

Case 2
Rachel earns $100,000 a year as a marketing and sales executive She is 48 years old and single. She is interested in saving for her eventual retirement.

Which alternative do you recommend? ______________________

Case 3
Elaine is 25 years old and earns $25,000 as a teacher. She is engaged to be married, has $2,000 in savings, and rents an apartment. She wants to use the $5,000 to help her buy a house.

Which alternative do you recommend? ______________________

Case 4
George is an attorney and earns $75,000. He is married to Monica, who earns $60,000 as a director of human resources. They have two children, aged 6 and 8 years old. They are making payments on their home and two cars. However, they both have excellent retirement plans and they have $20,000 in savings. They are interested in saving money for their children's college educations.

Which alternative do you recommend? ______________________

Case 5
Joey is a 27-year-old construction supervisor earning $40,000. He is married to Phoebe, who does volunteer work at a day care center. They are planning to have children soon and move out of their apartment and into a townhouse.

Which alternative do you recommend? ______________________

LESSON 13
SOME RISKS ARE GREATER THAN OTHERS

INTRODUCTION

Many people equate purchasing stocks with gambling in a lottery or taking a chance in a card game. While these activities share some characteristics, such as risk and playing the odds, there are important differences. First, gambling involves random chance and it usually is a zero-sum game. For every winner there is a loser; for every dollar won, a dollar is lost. Buying stocks is less random, and success in the stock markets can be shared by many without other people losing wealth. Second, the probabilities of success are far greater in buying stocks than in gambling. People who buy stocks can improve their odds of success and reduce their risk of loss.

ECONOMICS BACKGROUND

All decisions involve risk. Knowing which decisions are less risky than others can help people improve their opportunity to benefit from their decisions. Decisions that are dependent on random chance are much riskier than decisions to place savings in the stock market. In stock purchase decisions, individuals can help determine the outcomes by planning, education, hard work, and good judgment. These efforts reduce the influence of random chance.

LANGUAGE OF ECONOMICS

Gambling: Betting money on the outcome of a game, contest, or event where random chance is the main influence on the outcome.

Positive-Sum Game: An activity involving more than one person where all individuals can gain money without reducing another person's amount of money.

Price (of a stock): An amount agreed on between a buyer and a seller to exchange a stock certificate.

Risk: The chance of losing money. Risk is the opposite of safety.

Zero-Sum Game: An activity involving more than one person where someone can gain money only if another person loses an equal amount of money.

CROSS CURRICULUM SKILLS

Students model a situation by carrying out a demonstration; they determine probabilities of winning a lottery; and they use computation to solve problems.

OBJECTIVES

1. Students calculate the probability of winning in a card game and a lottery.
2. Students compare gambling and purchasing stocks.
3. Students identify strategies for reducing investment risk.

MATERIALS

◆ Visuals 1, 2, 3, 4, and 5
◆ Special Materials: One deck of playing cards, play money

TIME REQUIRED

One class period

PROCEDURE

A. Explain to students that they are going to compare gambling behavior and stock purchasing behavior to see if these activities are the same.

B. Display Visual 1, *Stock Markets and the Lottery*. Explain that many people think this belief is true. During this class we will test it out and see if there is a difference between gambling and buying stocks.

C. ✎ Pick two students to come to the front of the class and cut cards for play money. Each will start out with five one-dollar bills. They will cut cards five times, betting one dollar on each cut. The person with the highest card wins the bet on each cut. Have the other students keep track of the results or put a chart similar to the one in Visual 2, *Card Gamble: Sample Outcomes*, on the board and complete it with each cut of the cards. Cover the lower part of the Visual and display the table on Visual 2. The class results, after the five bets, should look something like the table on the top of Visual 2.

D. ✎ Ask students how this activity has changed the total wealth of the two individuals.
(*Answer: It has not changed the total wealth. In this example one person is one dollar richer and the other is one dollar poorer. The total wealth is the same.*)

E. Which of the following things helped the one player increase his or her wealth: research, hard work, honesty, education, experience, luck?
(*Answer: Only random luck helped one player gain more than the other player.*)

F. Explain that this type of activity is called a zero-sum game. Display the definition at the bottom of Visual 2. Explain that for every dollar gained by one person, someone else must lose a dollar. Playing the game will not increase total wealth.

G. Now let's consider a lottery. Display Visual 3, *Ten Million Dollar Lottery Opportunity*. As a class we could hold a lottery and offer the winner *ten million dollars*. It only costs $1 to buy a ticket.

H. ✎ Assume that 40 million people buy one ticket each. What is the probability that your ticket will win?
(*Answer: one in forty million*)

I. Is this a zero-sum game?
(*No, it is a negative-sum game. Forty million is contributed. Only $10 million is returned to the winner. Ten million is used to pay the expenses of running the lottery. Another $20 million goes to the people running the lottery. For example, it might be used as revenue for state programs. No new wealth is created.*)

J. Explain to the class that while all savings and investment decisions involve risk, some decisions involve greater risks than others. Display Visual 4, *Buying Stocks*. Ask: How is this situation different from gambling behavior such as cutting cards?
(*Answer: In this case, several factors are at work beyond chance.*)

K. Ask students the following questions:

1. How many people who buy a stock can win if the stock price goes up?
(*Every stockholder gains because the price increases for all shares.*)

2. Is the stock purchase more or less risky than a lottery?
(*Less risky. There is more than one winner. Also, people who buy stocks can diversify their holdings into several companies and spread the risk.*)

3. Do stock prices change randomly like cards pulled from a deck?
(*No. The stock price changes as a result of the choices made by management, consumers, and other buyers of stock shares. Buyers tend to value successful companies more highly than unsuccessful companies, so the stock price reflects individual judgments rather than random behaviors.*)

4. Does gaining new wealth come at the expense of other people?
(*No. Customers, management, workers, and owners of stock get better returns when the company is successful. Money is not taken from one group to enrich the other group. This is a case of a positive-sum game. All players can come out ahead.*)

5. Will people who buy stocks always be successful?
(*No. Stock prices do go up and down as the economy changes, as companies perform well or poorly, or as customer's tastes change. There is a risk to buying stocks, but it is much less risky than gambling.*)

CLOSURE

Review the main points of the lesson:

- Buying stocks and gambling are not the same thing.
- Gambling tends to be a zero-sum or negative-sum game in which people can get greater

wealth only at the expense of someone else. Buying stocks can increase everyone's wealth. It is a positive-sum game.

- Gambling usually has only one winner among many losers. Successful buyers of stocks can all increase their wealth without reducing someone else's wealth.
- Success in gambling depends upon random luck. While good luck certainly helps, success in buying stocks depends on hard work, knowledge, and taking steps to reduce risk.

ASSESSMENT

Multiple Choice Questions

1. The term zero-sum game is used to refer to
   *a. activities in which one person gains at the expense of someone else.
   b. activities where individuals gain without harming others.
   c. the break-even point of a stock purchase.
   d. the P/E ratio of a company financially breaking even.

2. It is important to know the likelihood or probability of something happening. An example might be a person betting on a coin flip whether the coin will come up heads or tails. What is the probability of getting a head on the next coin flip if you have gotten heads on the last four flips of the coin?
   a. 50%
   b. One chance out of 2
   c. Just as good as getting a tails
   *d. All of the above answers are correct

ESSAY

✍ Your rich uncle plans to give you $100,000 when you turn 21 years of age. Your best friend suggests that you take that money and buy lottery tickets with it. If you had $100,000 worth of lottery tickets you would have a very good chance to win the $10 million prize. Ten million dollars is better than $100,000. You would be smart to buy lottery tickets, he says. Decide whether you should take your friend's advice. Demonstrate in your answer that you understand the difference between buying stocks and gambling.

(Your friend is wrong. Your chance of winning the lottery is very low and it depends on someone else losing money. If ten million $1 lottery tickets are bought and you hold 100 of those $1 tickets, your chances of winning are 100,000 out of 10 million or one out of 100. Lotteries, like all gambling, produce winners only by random chance, and any single individual has only a small chance to win. Also, everyone except the winner must lose money for the lottery to work.

People who buy stocks do not rely on random chance to win. Hard work, knowledge, and careful attention to risk management can improve the chance to gain through stock purchases. Buying stocks is not a zero-sum game like gambling. Shareholders gain when companies succeed. For companies to succeed, they must satisfy consumers, workers, and stockholders. Therefore many people are interested in how you use your savings.)

JOURNAL

✍ Students should jot down everyday metaphors for luck and buying stocks which demonstrate the difference between luck and stock ownership. For example, "Luck be a lady tonight" versus "You reap what you sow."

VISUAL 1
STOCK MARKETS AND THE LOTTERY

Why do people gamble by buying stocks when they could do the same thing in the lottery and win much more money?

You might have to pay $50 just for one share of stock, and its value might increase by 10%. For a dollar or two you can buy a state lottery ticket and win millions.

VISUAL 2
CARD GAMBLE: SAMPLE OUTCOMES

Bab's Card	Bob's Card	Bab's Bet	Bob's Bet	Equals	Sum
Ace	King	+$1	−$1	=	0
two	eight	−$1	+$1	=	0
Jack	Queen	−$1	+$1	=	0
nine	four	−$1	+$1	=	0
ten	seven	+$1	−$1	=	0

Zero-Sum Game

An activity involving more than one person where someone can gain money only if another person loses an equal amount of money.

VISUAL 3

TEN MILLION DOLLAR LOTTERY OPPORTUNITY

Why does every state want to hold a lottery? Check out these numbers:

Forty million people in the state buy one lottery ticket each = $40 million revenue

Lottery expenses (advertising, printing, personnel costs) = $10 million costs

Lottery winner share = $10 million

Lottery profit = $20 million !!!

VISUAL 4
BUYING STOCKS

Imagine that you used $100,000 of your savings to buy 500 shares of five different companies at $40 a share. You made this purchase after doing your homework, researching the companies, investigating how they will fare in current economic conditions, checking for honest behavior and good management in past performance.

At the end of the year, stock prices for two companies fell from $40 to $30. Three companies' stock prices rose from $40 to $60.

1000 shares × $30 = $30,000
1500 shares × $60 = $90,000

Total Value = $120,000

VISUAL 5
POSITIVE-SUM GAME

An activity involving more than one person where all individuals can gain money without reducing another person's amount of money.

LESSON 14
HOW TO CHOOSE A STOCK

INTRODUCTION

In this lesson, students match stock selections to stock purchasing strategies; they gain experience in finding the company that produces a particular product and in identifying the parent company of a particular business.

ECONOMICS BACKGROUND

Like everybody else, people who buy stocks face scarcity. Their money is limited, so they must choose among stocks. In choosing, they try to weigh potential costs and benefits, hoping to maximize the benefits. They rely heavily on various types of information about the stocks they consider, and they pay a cost (in money or effort) to obtain this information. Information about economic expansions and contractions is especially valuable.

LANGUAGE OF ECONOMICS

Capital: Human-made resources used to produce goods and services. Capital goods are used by people to produce and distribute goods and services.

Cyclical Stocks: Stocks, such as high-priced consumer goods and capital goods, that are significantly affected by business cycle fluctuations. These stocks generally decline more during recessions and show more growth during expansions, than other stocks.

Defensive Stocks: Stocks, such as medicine, food, clothing, and public utilities, that are relatively unaffected by business cycle fluctuations, generally decline less during recessions, and show less growth during expansions than other stock.

Dividends: The amount of profit a company pays to its stockholders.

Early Phase of Development: The condition of a company that puts a product or service on the market for the first time; its sales are expected to grow rapidly.

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Growth Stock: A stock whose earnings and price are expected to show big increases in the future.

Income Stock: A stock that has paid sizable dividends in the past and is likely to do so in the future.

Industry: A group of companies that produce or sell the same kind of product or service.

Late Phase of Development: The condition of a company whose product or service has been on the market for a while, and its sales are no longer expected to grow rapidly.

Long-Term Investing: Buying stock and keeping it for many years in an effort to have one's money grow in step with stock prices in general.

Parent Company: A business that owns and controls another company.

Recession: A decline in Real Gross Domestic Product (GDP) for a period of at least six months. During a recession, businesses produce fewer goods and services.

Risk: The chance of losing money. Risk is the opposite of safety.

Short-Term Investing: The buying of stocks in order to sell them quickly in an effort to have one's money grow faster than the general level of stock prices.

Stock Table: An alphabetical listing of the transactions on the stock exchanges.

CROSS CURRICULUM SKILLS

Students develop skills in writing, speaking, reading, and group participation.

OBJECTIVES

1. Students describe strategies for stock selection as they identify factors that might result in greater benefit than cost.

2. Students analyze stock choices and identify the appropriate stock selection strategies.

3. Students identify the company that produces a particular product and the parent company of a particular business.

4. Students identify characteristics of economic cycles and predict the influence of cycles on consumer choices and stock performance.

MATERIALS

- ◆ Visuals 1 and 2
- ◆ Activities 1, 2, 3*, 4*, and 5*
- ◆ Newspaper stock tables

TIME REQUIRED

Two class periods

PROCEDURE

A. Now that the students have decided to invest in the stock market, they need a few tips on selecting stocks wisely. Remind the class that there are costs and benefits involved in any decision, including decisions about stock selection. This lesson will help them select a stock and find the name under which it is traded. To select, they need a strategy. Explain that a strategy is a way of methodically pursuing a goal. A strategy is a way of reducing risk.

B. Ask the students to imagine for a moment that buying a stock involved no risk. Ask: What are the characteristics of a perfect stock? Encourage some speculation. Display Visual 1, *Wombat, Inc.* Would this company be a good choice? Discuss each characteristic, encouraging students to explain why these factors tend to make this a perfect choice. (*There must be a market for the product; if people are buying the product, especially if they buy lots of it, the company will do well, the stock will be valued, and the price will rise. The company will probably have higher profits since the cost of distribution and production, the major determinant of supply, is low. The expected long life of the company and excellent earnings will support the value and price of the stock.*)

C. Explain that Wombat, Inc., is not a real company, and no company has all these characteristics, but the example helps us to think about what we might look for when choosing stocks.

D. Tell students that they are now going to examine strategies that others have suggested for reducing the risk involved in buying stocks. Distribute Activity 1, *Strategies for Stock Selection*. Read and discuss each section. Tell students that there are many other strategies, but these examples should get them started.

Answers to Activity 1

1. What is Peter Lynch's advice for picking stocks?
   (*Buy what you know. Stock tips are all around us. You can spot a good stock before Wall Street does.*)

2. Give an example of a stock that you think has a growing market.
   (*Answers will vary.*)

3. What is an example of a good stock to buy in a recession?
   (*A stock in a defensive industry such as medicine, food, clothing, public utilities.*)
   Example of a good stock to buy in an expansion?
   (*A stock in cyclical industries such as cars and appliances, or raw materials like aluminum, steel, tools, and equipment.*)

4. Why should you beware of front-page stories?
   (*If the stock is news, then everyone else knows about it.*)

5. Explain how changes in technology affect stock prices.
   (*Changes in technology could make the product obsolete, thus depressing the stock's price, or changes could increase demand for the product, thus increasing the stock's price.*)

E. Ask students to use the Peter Lynch strategy of "buy what you know." Ask the students to name a product or service that they think is as good as or better than other products or services on the market. When they have come up with several examples, settle on one or two to examine further. Display Visual 1 again and ask students how this product or service compares to the fictional Wombat, Inc. Then display each page of Visual 2, *Strategies for Stock Selection—Summary*, a summary of the reading. Ask students to take the product or service they selected through each of the considerations in stock selection. For example, what are the current markets for this product? Who will buy it? Can it be sold overseas? How would it fare in good times or lean times? Discuss each question, then decide whether the company warrants further research.

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*These activities are adapted from *The Stock Market Game Guide*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc., and used here with permission.

F. Continue to display Visual 2. Distribute Activity 2, *Matching Strategies to Stock Selections*. Divide the class into groups. Ask students to read and discuss each statement. For each statement they are to identify and describe the strategy they would use. Would they buy the stock(s) or not? Explain. Ask each group to report. Do students agree? Discuss their answers.

Answers to Activity 2

1. Widget Manufacturing Company

   Strategy: *Avoid obvious risk—specific stock situation*

   Reasoning: *Although the technology factor is important, the risk of losing the lawsuit is probably more important.*

2. WonderWalkers

   Strategy: *Peter Lynch—Buy what you know: markets*

   Reasoning: *Recognize a good product before everyone else; early phase of development means markets could expand and sales could grow rapidly.*

3. GM

   Strategy: *Economic Cycle—Good times and Cyclical stocks*

   Reasoning: *During periods of expansion, automobile stocks, which are cyclical, are more likely to show greater growth than defensive stocks. People are more confident about the present and future so they are more willing to make a large expenditure.*

4. Kellogg's, Wisconsin Valley Electric Company, GM

   Strategy: *Economic Cycle—Not so good times and Defensive stocks.*

   Reasoning: *During periods of recession, Kellogg's and Wisconsin Valley Electric Company, both defensive stocks, generally decline less than other stocks. However, GM, a cyclical stock, would be likely to decline more than stocks in other industries.*

G. Summarize Activity 2. Explain that when you select a stock you are making a reasoned judgment, using information you deem important to maximize the benefit and minimize the cost. Since you have limited funds to invest in *The Stock Market Game*, you must choose and give up your next best alternative. This is the opportunity cost.

H. In the next Activity, students will search for stocks using newspaper stock tables, a brand-name index, and a parent-company index. Tell students that they will search for the names of companies that make many of their favorite products. This search is necessary because if you can't find the listing in the stock market table, you can't buy the stock.

I. Distribute copies of Activity 3, *A Seemingly Simple Search for Selected Stocks*, Activity 4, *Brand Name and Parent Company Index*, and Activity 5, *Stock Search Activity Sheet*. Ask the students to read Activity 3 aloud. As a group, read and discuss directions 1, 2, and 3, perhaps doing a few of the tasks as examples.

J. Students might be unable to find particular stocks in the newspaper. For example, RJR Nabisco was purchased by Kohlberg Kravis Roberts & Co., so the stock of RJR Nabisco is not publicly traded. Consequently, students will not find RJR Nabisco in the stock tables if they begin with a popular product, such as Oreo cookies or Ritz crackers, which is made by Nabisco Brands, which is now part of KKR.

The stocks of Pillsbury Company are no longer traded because the business was purchased by the British company, Grand

Metropolitan. Other companies may not be publicly traded, so their stocks, too, will not be listed. And some, like Nintendo, are foreign companies whose stocks are not traded in U.S. stock markets. Finally, the list of companies in Activities 4 and 5 might require periodic updating, for particular companies might be purchased by other businesses in the same way RJR Nabisco was purchased by KKR.

CLOSURE

Ask students to look in their kitchen cabinets at home. Boxes of cereal or cans of vegetables will give the company name and sometimes the parent company. For example, Nabisco Shredded Wheat is now one of the Post cereals, which is owned by Kraft, which is owned by General Foods, which is owned by Philip Morris. Often companies furnish 800 numbers on their products, so students can call to ask about parent companies. Ask students to add to the Brand Name and Parent Company index when new connections are discovered.

ASSESSMENT

Multiple Choice Questions

1. A business that owns or controls another company is a(n) ________ company.
   a. brand name
   *b. parent
   c. subsidiary
   d. industry

2. Individuals selecting stock would need to consider
   a. economic cycle.
   b. markets available.
   c. technological changes.
   d. current industry conditions.
   *e. all of these.

ESSAY

✍ Your friend asks you for your opinion on buying American Manufacturing Limited stock. What information would you need to know before you could give a reasoned answer? Explain.
(You need to know what the company does and whether it makes good products/services. How is the company doing? How is the industry doing? What are its current and future markets? What is the financial position of the company? What is the company debt [assets to liabilities ratio], earnings growth over the past five years, high and low prices for the year [stock tables], and dividend payments? Is it in the early or late phase of development? Are new developments in progress? What other businesses does the company own? Is there diversity in the products they make? This information would help you determine the financial condition of the company, its markets, and potential growth.)

✍ What choices about daily expenditures and stock purchases do you think your parents, neighbors, employers, and so on, would make depending on the economic cycle? For example, if the economy went into recession, would they continue to buy bread and milk? How about a new car? To learn more about this, prepare a set of questions and interview several adults. Be sure you clearly differentiate between economic expansion and economic recession. Record people's answers and the reasons they give. Then write a report explaining the impact of the economic cycle on consumer and stock purchase decisions. Use your data for examples.

JOURNAL

✍ Choose an industry. Collect information about the industry from the newspaper financial pages, magazines such as *Business Week*, and television programs such as *Wall Street Week* and *Nightly Business Report*. Record the date and source for each item of information. Write a report describing the industry, its products, companies in the industry (successful and other), changes taking place—technological and political, domestic and global—and the probable future of this industry.

ANSWER SHEET FOR ACTIVITY 5
STOCK SEARCH ACTIVITY SHEET

1. Aunt Jemima: The Quaker Oats Company. **Quaker Oats.**
2. Band-Aid: Johnson & Johnson. **JohnsJohns**.
3. Betty Crocker: General Mills, Inc. **GenMills**.
4. Bisquick: General Mills, Inc. **GenMills**.
5. Cheerios: General Mills, Inc. **GenMills**.
6. Comet: Procter & Gamble Company. **ProctGam**.
7. Coppertone: The Coppertone Corporation, which is a part of Schering-Plough Corporation. **ScheringPl**.
8. Crest: Procter & Gamble Company. **ProctGam**.
9. Disney: The Walt Disney Company. **Disney**.
10. Eveready: Eveready Battery Company, Inc., which is a part of Ralston Purina Company. **RalstonPur**.
11. Ford Motor Company. The Ford Motor Company. **FordMotor**.
12. Fritos: The Frito-Lay Company, which is a part of PepsiCo. **PepsiCo**.
13. Ivory: Procter & Gamble Company. **ProctGam**.
14. Jell-O: General Foods Corporation, which is a part of Philip Morris Companies, Inc. **PhilipMor**.
15. Jif: Procter & Gamble Company. **ProctGam.**
16. Juicy Fruit: The Wm. Wrigley Jr. Company. **Wrigley**.
17. Kentucky Fried Chicken: Kentucky Fried Chicken Corporation, which is a part of PepsiCo. **PepsiCo**.
18. Kool-Aid: General Foods Corporation, which is a part of Philip Morris Companies, Inc. **PhilipMor**.
19. L. A. Gear: L. A. Gear, Inc. **LAGear**.
20. McDonald's: McDonald's Corporation. **McDonalds**.
21. Minute Maid: The Coca-Cola company. **CocaCola**.
22. Pepperidge Farm: Pepperidge Farm Inc., which is a part of Campbell Soup Company. **CamblSoup**.
23. Pepsi-Cola: PepsiCo. **PepsiCo**.
24. Pizza Hut: Pizza Hut, Inc., which is a part of PepsiCo. **PepsiCo**.
25. Polaroid: Polaroid Corporation. **Polaroid**.
26. Reebok: Reebok International. **Reebok**.
27. Raisin Bran: The Kellogg Company. **Kellogg**.
28. Sony: Sony Corporation. **Sony Cp**.
29. Star-Kist: Star-Kist Foods, which is a part of H. J. Heinz Company. **Heinz**.
30. Taco Bell: Taco Bell, Inc., which is a part of PepsiCo. **PepsiCo**.
31. Tender Vittles: Ralston Purina Company. **RalstonPur**.
32. Trident: American Chicle Company, which is a part of Warner-Lambert Co. **WarnerLam**.
33. Tylenol: McNeil Consumer Products Company, which is a part of Johnson & Johnson. **JohnsJohns**.
34. Valvoline: Valvoline Oil Company, which is a part of Ashland Oil Company. **Ashland Oil**.
35. Ziploc: Dow Chemical Company. **DowChem**.

VISUAL 1

WOMBAT, INC.

Wombat, Inc., Makes a Product That...

- Everyone needs
- No one has
- Is used daily
- Cannot be duplicated
- Will be needed in the future
- Costs little to produce and ship
- Doesn't need to advertise
- Will enjoy a growth rate of 50% per year for the next ten years
- Never had a down year in its 100-year history

VISUAL 2
STRATEGIES FOR STOCK SELECTION—SUMMARY

1. **Peter Lynch:** Go with what you know (after some research)
   "During a lifetime of buying cars or cameras, you develop a sense of what's good, what's bad, what sells, and what doesn't... and... you know it before Wall Street knows it."

2. **Markets: Current and Future**
   A project must have customers today and even more tomorrow or it isn't growing.
   - Phase of Development—Early or Late?
   - Global Markets—Can the product/service be sold overseas?
   - Demographics—Will a large percentage of the population want this product?

3. **Economic Cycle:** Is the economy expanding or slowing?
   The performance of many stocks will be affected by economic cycles.

Good times:	Most people who want to work are employed. People and businesses are spending money.
Not so good times:	More people than usual are out of work or worried about being out of work. People and businesses are not buying as much.
Defensive industries:	Even in difficult times, people use toothpaste, eat food, and use electricity.
Cyclical stocks:	High-priced consumer goods like cars, appliances, new houses Raw materials like aluminum, steel.

VISUAL 2 (CONTINUED)

and cement

4. **Avoid Obvious Risks**
    - Front page companies and this year's winners
    - Current industry condition
    - Changes in technology
    - Specific stock situation

5. **Selecting Stock for *The Stock Market Game***
    - Very Short Term
    - Growth Stocks—Small companies, newer companies,
    - Stocks listed on the Nasdaq Stock Market

ACTIVITY 1
STRATEGIES FOR STOCK SELECTION

Name ______________________ **Date** ______________________

PETER LYNCH: BUY WHAT YOU KNOW

Go with what you know. That is the advice of Peter Lynch, former portfolio manager of Fidelity Magellan Fund. "During a lifetime of buying cars or cameras, you develop a sense of what's good, what's bad, what sells, and what doesn't. If it's not cars you know about, you know something about something else, and the most important part is, you know it before Wall Street knows it."

Think about what you know. What product do you really like? What is popular among your friends? Who makes it? Do you think it will continue to be popular? The point Peter Lynch makes is that stock tips are all around us. Often, we might spot a good company before it is well known. He does caution, though, that you have to do your homework. If you can't explain what the company does, then you shouldn't buy it. In addition to knowing what the company does and whether it makes good products/services, you also need to know how the company is doing, the financial position of the company, and other important information.

MARKETS: CURRENT AND FUTURE

A product must have customers today and even more tomorrow or it isn't growing. When selecting a stock, you must consider the markets available for the product/service. Does almost everyone already own one? In the early phase of development, a company first puts a product or service on the market and its sales are expected to grow rapidly because not everyone has what it sells. In the late phase, a company's product or service has been on the market for a while, and its sales are no longer expected to grow rapidly. The stock of a rapidly growing company is more likely to increase in price, especially in the short term of *The Stock Market Game*.

Global markets are important as well. Examine prospects for U.S. companies in foreign markets. U.S. companies moved into Mexican markets with NAFTA (the North American Free Trade Agreement), Eastern Europe with the fall of communism, and into China and Russia with economic reform. McDonald's is a good example of a company that had saturated the U.S. market, and, as a result, its sales and growth were flat. It moved aggressively into foreign countries, developed new markets, and continues to grow. Remember that the product or service must be appealing to businesses or consumers in these countries.

Demographics (population) also affects current and future markets. Will a large percentage of the population want this product? Imagine that your age group was the largest age group in the population. Companies that produced what you bought would do very well. In the 1950s and 1960s, the baby boomers were teenagers, and there were more of them than any other group. Record companies, fast-food restaurants, and other companies that targeted teenagers did very well. Because many products/services are targeted to a certain age group, you have to consider who will buy the product and the number of potential customers when you make a judgment on current and future markets.

ECONOMIC CYCLE

Is the economy booming or slowing down?
The performance of many stocks will be affected by economic cycles. Buyers of stocks need to know which ones and why. When the economy is growing, most people who want to have jobs have them, and people and businesses are spending money. Individuals might decide to purchase a new car, and businesses might decide to buy some new machinery. When the economy slows down, more people than usual are out of work or worried about being out of work, and people and businesses cut back on their spending; they are not likely to spend money on items or services they do not absolutely need. They are not as likely to purchase a new car, build a house, take a trip to Hawaii, or—in the case of a business—

ACTIVITY 1 (CONTINUED)

build a new plant or buy new equipment. But even in bad economic times, people still buy some products. They brush their teeth, eat cereal for breakfast, take a pill for that awful cold, and heat their homes. They might be a little more careful about expenditures, but some items will be purchased despite the downturn.

Understanding the economic cycle helps you make judgments about when to buy which stocks. During recessions, stocks in defensive industries (medicines, food, clothing, public utilities, etc.) generally decline less than stocks in other industries. During expansions, defensive stocks often show less growth and return. Companies in cyclical industries (high-priced consumer goods like cars and appliances; raw materials like aluminum, steel, and cement, and tools and equipment) are often highly affected by business cycle conditions. During recessions, stocks in cyclical industries generally decline as much as or more than stocks in defensive industries. During expansions, cyclical stocks offer much higher returns and growth potential.

AVOID THE OBVIOUS RISKS

Front-page stories and this year's winners

Beware of front-page stories. Of the 20,000 stocks publicly traded, only two or three will be found on page one. This year's winners are unlikely to be next year's winners. Most stocks don't get headlines, and when they do, everyone else knows about it as well, including Wall Street. Stick with the boring stocks. You will have to work a little harder, but your chances of picking a good stock are much better.

Current Industry Condition

To what industry (group of companies that produce or sell the same kind of product or service) does your potential stock selection belong? Industry classification includes transportation, automotive, food and beverage, retail/apparel, health care, entertainment, communication, utilities, financial, and several others. Will current events in the United States or other nations affect businesses in a specific industry? Is that industry in trouble? For example, when the Clinton administration was developing a plan for government-sponsored health care in 1994, there was speculation that prices would be regulated for some medicines. As a result, the pharmaceutical companies experienced a sharp drop in their stock prices. Merck, a strong company with an excellent record of growth and income, dropped right along with the others. A given company might be a good company, but a given time might not be a good time for its stock. (Merck later recovered.)

Changes in Technology

You also have to consider whether your selection will be affected by changes in technology. IBM, known as Big Blue, staked its growth on mainframe computers. But growth in personal computers surged, and companies producing personal computers clearly outdistanced IBM. IBM stock recovered later, too, but until it caught up to market technology its prices were affected. Sometimes, the choice isn't as obvious as it seems. In the music industry, CD players virtually replaced turntable record players. Recently, however, some music lovers have argued that CDs do not last as well as records and do not have the same quality of sound. Many older people have not parted with their records and wish to purchase new record players. *If* this were the case, would the market for CD players and record turntables be affected? Would it affect their stock? You bet!

Specific Stock Situation

Even if the markets, industry, economic cycle, and technology angles all check out, stock buyers still have to check the specific stock situation. If a particular company is in trouble or could be in trouble, then it is not a good choice. For example, although the contact lens industry had been relatively strong and healthy, one of the companies, Bausch and Lomb, experienced significant problems when its management sought an unrealistic growth rate. The impact of this goal on production and distribution resulted in large unsold inventories and eventually a precipitous drop in profit and in the price of a stock. Bausch & Lomb stock would not have been a wise choice at that time.

ACTIVITY 1 (CONTINUED)

DO YOUR HOMEWORK

Once you have a general idea about how your selection fares in each of these categories, it is time to use some common sense and do a little research. You should know what the company does and whether it makes good products/services. How is the company doing? What is the financial position of the company? What is the company debt (assets to liabilities ratio), earnings growth over the past five years, high and low prices for the year (stock tables)? What about dividend payments? Is the company in an early or late phase of development? Are new developments in progress? What other businesses does the company own? Is there diversity in the products it makes? Information can be found by writing to the company for an annual report, by looking at newspaper stock tables, by calling or visiting the business department at your city library, by calling an area broker, etc. The bottom line is that YOU have to do some thinking, some research, some more thinking, and then make a selection.

SELECTING STOCK FOR THE STOCK MARKET GAME

Selecting stock for *The Stock Market Game* differs significantly from real-life stock buying—which is definitely not a game. Generally, stock buyers' concerns for safety and need for long-term commitment influence decisions in real life. Stock buyers generally have two main reasons for investment. First, they expect the business to share the money it makes with its shareholders. Usually, firms share these profits through payments, called dividends, every three months. Stocks known to pay regular dividends are called income stocks. Second, stock buyers expect the stocks to increase in value so that they will be able to sell them later at a higher price. Stocks expected to increase in value are called growth stocks.

Income stocks, which are mature industry stocks, may not change much in the short 10-week period of *The Stock Market Game*. *Game* participants therefore should consider growth stocks. These stocks tend to be smaller, newer companies whose earnings and price are expected to show big increases in the future. Because of the 10-week limit, you need stocks that will show greater than average appreciation. Because growth stocks tend to be issued by the smaller companies, you will most likely have to select unlisted stocks on the Nasdaq Stock Market. But, remember, you are using hypothetical money in *The Stock Market Game*. Your only risk is losing. Placing savings in real markets involves a long-term commitment, a well understood stock purchase plan, and diligent research.

Questions for Discussion

1. What is Peter Lynch's advice for picking stocks?
2. Give an example of a stock that you think has a growing market.
3. What is an example of a good stock to buy in a recession? Expansion?
4. Why should you beware of front-page stories?
5. Explain how changes in technology affect stock prices.

ACTIVITY 2
MATCHING STRATEGIES TO STOCK SELECTIONS

Name ______________________ **Date** ______________________

For each of the following, read and discuss each statement. Using *Strategies for Stock Selection* (Activity 1), consider each stock(s) mentioned, then identify and describe the strategy you would use for stock selection. Decide whether you would buy the stock(s) or not. Explain your reasoning.

1. **Widget Manufacturing Company** has been on the leading edge of technological change. Widget's sales and profits have been very strong. However, it is currently being sued for patent infringement, and the evidence against it appears strong.

   STRATEGY: ______________________

   REASONING: ______________________

2. I love my **Wonder Walkers**. They are the best shoes I have ever worn. My friends all wear them. I'm surprised more people haven't discovered them, but the company that produces them is small, so their distribution is limited.

   STRATEGY: ______________________

   REASONING: ______________________

3. The economy is rolling along, and so am I. My friends and I have great jobs, and our futures are looking bright. I think I'll treat myself to some **General Motors** stock.

   STRATEGY: ______________________

   REASONING: ______________________

4. It's rough out there. The economists say we are in a recession. I still have my job, but a lot of others don't. I'd better be careful with my stock selections. I think I'll buy **Kellogg's** or **Wisconsin Valley Electric Company**. Or maybe it would be safer to buy **General Motors** stock. After all, everybody needs a car—even when times are rough.

   STRATEGY: ______________________

   REASONING: ______________________

From *Learning from the Market*, © National Council on Economic Education, New York, NY

ACTIVITY 3
A SEEMINGLY SIMPLE SEARCH FOR SELECTED STOCKS

Name ______________________________ **Date** ______________________________

When picking stocks, you are likely to think of popular brand names. If you are a big fan of Pizza Hut or Juicy Fruit gum, you might consider buying stocks in these businesses. But, no matter how hard you look in the newspaper stock tables, you will not find these two stocks.

Pizza Hut stock is not listed in the newspaper because Pizza Hut is owned by PepsiCo, Inc. In this case, PepsiCo is a parent company, one that owns and controls another business. So to purchase part ownership of Pizza Hut, you must first know that it is owned by PepsiCo. You can then buy stock in PepsiCo and thereby, indirectly, own part of Pizza Hut.

You might also get stuck when trying to buy stock in Juicy Fruit gum. Juicy Fruit is a brand name, which is the popular name of a product. Brand names can be different from the names of the businesses that make those products. In this case, the product is made by the Wm. Wrigley Jr. Company. So if you want to be part owner of the company producing Juicy Fruit gum, you would purchase Wrigley stock.

When trying to find a stock in the newspaper, you often become an explorer of unknown business territories. As illustrated by Juicy Fruit gum, you might have to search for the name of the company that produces the item. Or, in the case of Pizza Hut, you might have to search for the name of the parent company. In other cases you might not have to explore at all. For example, if you want to buy stock in Ford Motor Company, you will find that business listed under that name in the newspaper stock tables.

Stock Search Directions

1. Now it is your turn to search for stocks. All the stocks used in this Activity are listed on the New York Stock Exchange. Begin by trying to find the brand names listed in Activity 5, *Stock Search Activity Sheet*, in the newspaper stock table under the New York Stock Exchange Composite transactions. The newspaper presents companies in alphabetical order and usually abbreviates their names. If you find the name in the stock table, write it as it appears in the table in the blank next to the brand name. For example, the Ford Motor Company is listed in the stock table as Ford Motor, so this name has been written in the blank next to the name Ford Motor Company.

2. You won't find all the brand names listed in Activity 5, *Stock Search Activity Sheet*, in the newspaper stock table, because the name of the product is not always the same as the name of the company. You need to take a second step in your stock search. Check the Brand Name Index in Activity 4, *Brand Name and Parent Company Index*, for an alphabetical listing of the information you need to continue your search. For example, Juicy Fruit appears in the index. The producer of Juicy Fruit is the Wm. Wrigley Jr. Company. Now check the newspaper stock table, and you will find the company listed as Wrigley. Write Wrigley next to Juicy Fruit on Activity 5, *Stock Search Activity Sheet*. See how many of the brand names in this index you can also find in the newspaper stock table.

3. No one said this would be easy. For some of the brand names, the search won't be over. You won't be able to find some of the companies listed in the Brand Name Index in the newspaper stock tables because the company that makes the product is owned by another company. For example, the Frito-Lay company produces Fritos. But Frito-Lay Inc. is owned and controlled by a parent company, so the parent company, not Frito-Lay, is listed in the stock tables. You must search further by checking the Parent Company Index in

ACTIVITY 3 (CONTINUED)

Activity 4, *Brand Name and Parent Company Index*. The parent company of Frito-Lay is PepsiCo. Find PepsiCo in the newspaper stock table. This completes your search. Write PepsiCo next to Fritos on Activity 5, *Stock Search Activity Sheet*.

Complete Activity 5, *Stock Search Activity Sheet*. Remember there are three steps to help you in your search.

1. The newspaper stock table for the New York Stock Exchange.
2. The Brand Name Index in case the company name is different from the product; then back to the newspaper stock table.
3. The Parent Company Index in case the company that produces the product is owned by another company; then back to the newspaper stock table.

Whether your search ends with step 1, 2, or 3, record the company name as listed in the newspaper stock table on Activity 5, *Stock Search Activity Sheet*.

HAPPY HUNTING!

ACTIVITY 4
BRAND NAME AND PARENT COMPANY INDEX

Name ______________________ **Date** ______________________

Brand Name Index

Aunt Jemima: Pancake mixes, syrup, flour, etc. The Quaker Oats Company.
Band-Aid: Adhesive bandages. Johnson & Johnson.
Betty Crocker: Prepared foods, baking mixes, etc. General Mills, Inc.
Bisquick: Baking mix. General Mills, Inc.
Cheerios: Cereal. General Mills, Inc.
Comet: Cleanser. Procter & Gamble Company.
Coppertone: Tanning lotion. The Coppertone Corporation.
Crest: Toothpaste. Procter & Gamble Company.
Eveready: Batteries. Eveready Battery Company, Inc.
Fritos: Corn chips. Frito-Lay, Inc.
Ivory: Soap and hair-care products. Procter & Gamble Company.
Jell-O: Gelatin. General Foods Corporation.
Jif: Peanut butter. Procter & Gamble Company.
Juicy Fruit: Chewing gum. Wm. Wrigley Jr. Company
Kentucky Fried Chicken: Food franchises. Kentucky Fried Chicken Corporation.
Kool-Aid: Soft-drink mixes. General Foods Corporation.
L.A. Gear: Athletic and leisure footwear and apparel. L.A. Gear, Inc.
Minute Maid: Fresh and frozen fruit juices and soft drinks. The Coca-Cola Company.
Pepperidge Farm: Baked goods. Pepperidge Farm, Inc.
Pizza Hut: Pizza Hut, Inc.
Reebok: Athletic footwear. Reebok International.
Raisin Bran: Cereal. The Kellogg Company.
Star-Kist: Tuna. Star-Kist Foods.
Taco Bell: Fast-food franchise. Taco Bell, Inc.
Tender Vittles: Cat products. Ralston Purina Company.
Trident: Sugarless gum and mints. American Chicle Company.
Tylenol: Analgesic. McNeil Consumer Products Company
Valvoline: Motor oil. Valvoline Oil Company.
Ziploc: Storage bags. Dow Chemical Company.

Parent Company Index

American Chicle Company: Part of Warner-Lambert Company
General Foods Corporation: Part of Philip Morris Companies, Inc.
Coppertone Corporation: Part of Schering-Plough Corporation.
Eveready Battery Company, Inc.: Part of Ralston Purina Company.
Frito-Lay, Inc.: Part of PepsiCo.
Kentucky Fried Chicken Corporation: Part of PepsiCo.
McNeil Consumer Products Company: Part of Johnson & Johnson.
Pepperidge Farm, Inc.: Part of Campbell Soup Company.
Pizza Hut, Inc.: Part of PepsiCo.
Star-Kist Foods: Part of H. J. Heinz company.
Taco Bell, Inc.: Part of PepsiCo.
Valvoline Oil Company: Part of Ashland Oil Company.

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ACTIVITY 5
STOCK SEARCH ACTIVITY SHEET

Name ____________________ **Date** ____________________

Brand Name	Company Name as Listed in Newspaper	Brand Name	Company Name as listed in Newspaper
1. Aunt Jemima		19. L.A. Gear	
2. Band-Aid		20. McDonald's	
3. Betty Crocker		21. Minute Maid	
4. Bisquick		22. Pepperidge Farm	
5. Cheerios		23. Pepsi-Cola	
6. Comet		24. Pizza Hut	
7. Coppertone		25. Polaroid	
8. Crest		26. Reebok	
9. Disney		27. Raisin Bran	
10. Eveready		28. Sony	
11. Ford Motor Co.	*FordMotor*	29. Star-Kist	
12. Fritos		30. Taco Bell	
13. Ivory		31. Tender Vittles	
14. Jell-O		32. Trident	
15. Jif		33. Tylenol	
16. Juicy Fruit		34. Valvoline	
17. Kentucky Fried Chicken		35. Ziploc	
18. Kool-Aid			

LESSON 15

BUILDING A STOCK PORTFOLIO

INTRODUCTION

Students will learn about the advantages of diversification in a stock portfolio.

ECONOMICS BACKGROUND

Just as companies purchase capital goods, individuals invest in themselves (usually with education) to improve their chances of gaining future income. This is called developing human capital. In both sorts of investment, diversification helps to reduce the risk.

LANGUAGE OF ECONOMICS

Capital: Human-made resources used to produce goods and services. Capital goods are used by people to produce and distribute goods and services.

Diversification: Buying stocks in various industries.

Financial Capital: Assets, such as stocks, that produce income.

Human Capital: The skills, knowledge, and experience that enable people to be productive.

Investment: The putting to use of money, capital, or time in the hope of getting a profitable return.

Portfolio: A selection of investments used to produce an income or return. Can be financial, as in a stock portfolio, or personal, as in investments in human capital.

Risk: The chance of losing money. Risk is the opposite of safety.

CROSS CURRICULUM SKILLS

Students develop skills in reading and speaking. They use equivalent forms of fractions and decimals, compute percents, use computation to solve problems, interpret and analyze tables of data, and construct and interpret a bar graph.

OBJECTIVES

1. Students compute contributions and accumulations of portfolio investments.

2. Students compare diversified and nondiversified portfolios and explain advantages and risks of each.

3. Students compare and contrast stock portfolios and personal portfolios.

4. Students explain the concept of capital and list examples of financial and human capital.

5. Students explain how they can plan for their future through investment in human capital.

6. Students analyze the relationship between education and income.

MATERIALS

◆ Visuals 1, 2, and 3
◆ Activities 1, 2, and 3*

TIME REQUIRED

Two class periods

PROCEDURE

A. Tell students that a successful return from buying stock often depends not just on which stocks you select, but which *combination* of stocks you select. Ask if they are familiar with the advice, "Don't put all your eggs into one basket." People who buy stocks often follow similar advice. Since they cannot predict the future with certainty, they often seek to protect their financial assets by hedging their choices. Stock buyers do that by balancing or diversifying their stocks; if one company or industry doesn't produce revenue, perhaps another will. When you diversify in the stock market, you don't put all your eggs into one basket; instead, you spread your investment over a diverse set of investment opportunities. Remember, however, that even when you diversify, there is still risk. You could have used your savings differently.

B. ✎ Distribute Activity 1, *Stock Portfolio Case Studies*. Tell the students that this lesson will help them understand how risks involved in

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*Activity 3 is adapted from *The Senior Economist, A New Look at Poverty and Welfare* (Volume 10, No. 2, September 1994): *Poverty and Education*, by Gail Funk, and *Education and Income: National and International Perspectives*, by James S. Leming.

using financial capital can be reduced through diversification—buying stocks in various industries. Read **What The Stock Buyers Did** and ask students to compute the answers for Column A. Read **What The Year and Stocks Did** and the directions for computing percentage change. Review percentage changes and fraction-to-decimal operations or use the fraction conversion table below. Have students complete Chart 2. Then ask students to fill in Column B, calculate the '95 value, complete Column C, and questions 1 and 2. Divide the class into groups to answer questions 3-6.

Fraction conversion to decimals:
1/16 = .063 1/8 = .125 1/4 = .25 3/8 = .375
1/2 = .5 5/8 = .625 3/4 = .75 7/8 = .875

C. Display Visual 1, *The Case for Diversification.* Compare the two strategies, evaluating the risks of each, and draw a conclusion about diversification in investment.

D. Summarize the lesson to this point. Explain that ownership of stocks, our investment in the stock market, has a value. The value might be the income produced or the money gained through sale of the stock. But stock ownership also involves risk—the risk of losing that value. The strategy of diversification reduces the risk and protects, to some extent, our financial capital.

Answers to Activity 1 Stock Portfolio Case Studies:

CHART 1: See Visual 1

CHART 2:

Stock	Price Dec. 1994	Price Dec. 1995	Difference in Price	Percentage Change
Kmart	13⅜	7⅛	**6.25**	**47% decrease**
Sears	24	39	**15**	**63% increase**
MCI Comm	21⅛	22⅛	**1**	**5% increase**
GLGAF	25⅞	28⅜	**2.5**	**10% increase**
Total				

1. What was the percentage change in A's investments? *(47% decrease.)*

2. What was the percentage change in B's investments?
(15% increase.)

3. Who had the better return on investment? Why?
(B did. His investment increased 15%, while A's decreased 47%.)

4. What advantage did B have in diversification? Explain.
(B's losses were offset by his gains. He did not depend on one stock for a return. When A's stock dropped, his entire investment decreased.)

5. What if A had put all his eggs in the Sears basket instead of Kmart?
(He would have had a 63% increase on $20,000 (or $12,600). His investment would be worth $36,600.)

6. Evaluate the risk of each strategy.
(A's strategy is much riskier than B's. If A is correct, he will gain more, but he also risks losing more. B's strategy is safer. He is less likely to lose as much, since his stocks are spread out, so that all of them would have to decrease for him to suffer the same loss as A. However, he is also less likely to gain as much.)

E. Help students make the transition from thinking about financial capital to thinking about human capital. Explain that capital, something that is used to produce something else, can be financial and/or human. When people buy stocks, they anticipate an income from their purchase—just as a company would invest in capital goods, such as equipment or raw materials, and expect a return from productivity. In the same way that investors purchase financial assets, and companies purchase capital goods, individuals invest in themselves, usually with education, to improve their chances of gaining future income. This is called investing in human capital.

F. Display Visual 2, *A Capital Idea.* Discuss the concept of investment in one's self as human capital. The greater the investment, the better the human capital, the greater the opportunity that on average it will produce income and revenue. Ask students to think about, then state, ways in which they or their friends add to their human capital. Encourage them to include the obvious—education, practicing a sport or physical fitness, good health habits (no smoking or drug abuse), and so on—as well as the less obvious investments like developing positive attitudes toward self and others, values of honesty and hard work, cultivating good friends, and pursuing a hobby.

G. Distribute Activity 2, *A Tale of Two Techniques*. Read the case study and discuss the questions. As you discuss this comparison of diversification in human capital to diversification of financial capital, reinforce the notion that students do not have to be investing in the stock market to be investing in their future. The choices they make today will affect return on their capital. The translation for the basketball slang is as follows: They took *the rock* (the ball) ... worked on *their handles* (ball handling), worked especially hard on *treys* (3-point shots), and always got *in the paint* (inside the free throw line, beyond the painted line, under the basket) to *jam* (put the ball in the basket from above the rim) ... they *know it was money* (knew it would go in).

Answers for Activity 2, A Tale of Two Techniques:

1. List the investments each made to his own personal portfolio. How did each person add to his human capital?
(*Juan developed his athletic ability in high school and in college. He also pursued his education, taking advanced classes in high school, and graduating from college. He selected majors and minors that he thought offered him a return in the future. He also pursued his interest in music and cultivated friendships. Carlos developed his athletic ability in high school and that was it. He focused narrowly on sports, to the exclusion of all else.*)

2. How did the investment pay off for each?
(*It paid off for Juan. His athletic skills and high school education enabled him to get into college where he enjoyed playing the sport he loved and gaining an education. When pro ball wasn't an option, he still had a good future because of his education, which helped him land a good job. The time and energy Carlos invested in basketball didn't pay off. Since he didn't make it to college, because of his academic record, he never had a chance at the pros. There is almost no market for former high school basketball players.*)

3. Which one was better equipped to handle the future? Why?
(*Juan was better equipped to handle the future because he had more skills and, therefore, more options.*)

4. Compare the two personal portfolios. How does this comparison illustrate the idea of diversification? Of putting all your eggs into one basket? Of risk?
(*Carlos put all his eggs into one basket. He took a chance that his athletic skills would pay off and did not invest in himself in any other significant way. Juan invested in his human capital in several ways: athletic skill, education, areas of interest, and development of social relationships. Although he was confident that he would make it into the pros, he diversified, just in case that didn't work out. Carlos took a greater risk than Juan, because he had only one option for success. Juan had several.*)

5. How are you investing in your human capital?
(*Answers will vary.*)

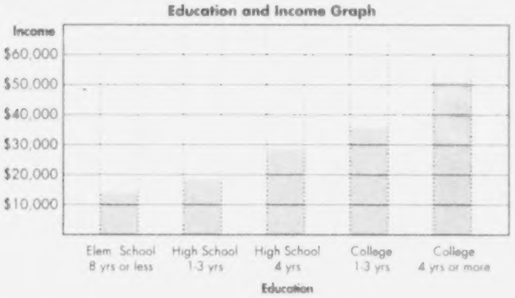
6. How are you diversifying your investments in human capital?
(*Answers will vary.*)

H. Extend this activity by asking students to consider the number of hours students spend on sports compared to English or math. The total time spent on sports includes the athlete's time in practice, developing a playbook, working out to develop a body, etc., and the spectator's time spent preparing for and attending games, pep rallies, etc. What do people give up in exchange for time spent on sports? What do they get in return for this investment? How well might they do academically if this same amount of time were spent on studies instead of sports?

I. Display Visual 3, *You Think You'll Play in the Pros? Not So Fast!*. Use these statistics to support the need for athletes, as well as for everyone else, to get an education. Even if everyone currently playing professional basketball decided to quit, there would still be only 348 positions open. Only a small number of individuals have ever joined the pros directly from high school; even good players still have to get to college and be *the best* on their college team even to have a chance at the openings. You might want to discuss why students who don't go to college don't play in the pros. (*Basketball is a sport that requires a lot of practice and skill. In college, players have access to good coaching, lots of practice, and competition against other excellent players. They learn their craft well.*) Even if they did make it to the pros, their careers would be over by age 30. Then what? But the chance of making it into the pros is very, very small. So while $1.6 million a year would be some nice change, better get an education, just in case.

J. Distribute Activity 3, *Is Education a Good Investment?*. Read the introduction, then ask students to complete the bar graph. When they have checked their graphs for accuracy, ask them to complete the questions.

Answers to Activity 3



1. Describe the relationship between education and income. Does education pay?
   (*The higher the level of education, the higher the income, on average. Yes.*)
2. How much more may a high school graduate expect to earn per year than an 11th grade dropout?
   (*$10,553*)
3. Assuming a 40-year work life and no pay raises, how much more might a high school graduate expect to earn over a lifetime than an 11th grade dropout?
   (*$422,120*)
4. Does it pay to stay in high school one more year and graduate? Explain.
   (*Yes. The difference in salary is significant.*)
5. Assuming a 40-year worklife and no pay raises, how much more might a college graduate expect to earn than a high school graduate over a lifetime?
   (*$872,200*)
6. How is education an example of investing in human capital?
   (*Education develops our human capital by increasing our skills, enabling us to be more productive and to gain a higher income, greater job satisfaction, and better professional opportunities.*) You might want to discuss why individuals with higher incomes have greater job satisfaction.
7. Is education a good investment for your personal portfolio? Why?
   (*Yes. Education usually increases options and income.*)

K. Pose one final problem to the class. If the level of education is so closely related to income, why doesn't everyone get a Ph.D.? Why do some students drop out of school? (*Invite students to speculate on various answers. Explain that while the economic value of an education is well known, people often respond to short-term incentives. For some students, the opportunity to earn income sooner by leaving school is worth more than staying in school and hoping to earn more income in the future.*)

CLOSURE

Summarize the main points of the lesson. Diversification usually makes good sense. What we choose to invest in our human capital—our personal portfolio—is related to our earnings, health, and happiness over our lifetime. Attaining alternative interests and skills prepares us for the unknown future. When we do not diversify, we run the risk of losing it all. Diversification in a stock portfolio or personal portfolio reduces risk; it protects, to some extent, our capital.

ASSESSMENT

Multiple Choice Questions

1. Investment in human capital is similar to investment in the stock market in all the following ways except
   a. both anticipate an income return from the investment.
   b. in both, diversification reduces risk.
   c. both are similar to a company buying new machines.
   *d. in both, the emphasis is on the present, not the future.

2. The greatest advantage to diversification in a stock portfolio is that with diversification
   a. the investor gets more annual reports.
   b. investors concentrate on one profitable stock.
   *c. investors reduce the risk.
   d. investors are guaranteed a profit.

ESSAY

✍ What are the advantages of diversification in investment? How is diversification related to risk? Give an example.
(*Diversification helps reduce the risk—the chance of losing money—when investing. Investors do that by balancing or diversifying their stocks so if one company or industry doesn't produce revenue, another will. Example: Investors select stocks from different industries to reduce the risk of a bad period for a particular industry.*)

✍ Do you have to invest in the stock market to invest in your future? Explain.
(*No. Just as investors purchase financial assets and companies purchase capital goods, individuals invest in themselves, usually with education, to improve their chances of gaining future income. This is called investing in human capital.*)

JOURNAL ✍

Do a time analysis. On what do you spend most of your time? What investment decisions do you make? In what are you investing? Analyze your investment in terms of potential for return.

In Activity 2, *A Tale of Two Techniques*, which student did you identify with—the one who invested all his time, energy, and interest in basketball, or the one who diversified? What is the central theme of your life?

Put together a financial investment portfolio for *The Stock Market Game*. Then put together a *personal* investment portfolio for the same 10 weeks. In what do you invest? Does the value increase? What is the expected return?

VISUAL 1

THE CASE FOR DIVERSIFICATION

Chart 1

Stock Buyer A Portfolio	Number of shares	Stock	'94 price	A Initial Investment	B '95 price	C '95 Value of Investment
	1,500	Kmart	13⅜	$20,062.50	7⅛	$10,687.50
Total				$20,062.50		$10,687.50
Stock Buyer B Portfolio	250	Kmart	13⅜	$3,343.75	7⅛	$1,781.25
	250	Sears	24	$6,000.00	39	$9,750.00
	200	MCI Comm.	21¼	$4,250.00	22¼	$4,450.00
	250	GLG&P	25⅞	$6,468.75	28⅜	$7,093.75
Total				$20,062.50		$23,075.00

Stock Buyer A Portfolio: 47% Decrease.

Stock Buyer B Portfolio: 15% Increase.

VISUAL 2
A CAPITAL IDEA

"Ownership of stocks is considered capital in that stocks are assets that produce income and revenue."

"Schooling, ... expenditures for medical care, and lectures on the virtues of punctuality and honesty also are capital... because they may raise earnings, improve health, or add to a person's good habits over much of his lifetime."

"Economists regard expenditures on education, training, medical care, and so on as investments in human capital—*human*, because people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets."

Gary S. Becker
University Professor of Economics and Sociology at the University of Chicago
The Senior Economist, September, 1995, National Council on Economic Education.

HUMAN CAPITAL
Skills and knowledge that an individual uses to produce goods and services.

VISUAL 3

YOU THINK YOU'LL PLAY IN THE PROS? NOT SO FAST!

In 1994, **518,127** high school boys participated in high school basketball in the United States.

Each year, approximately **56** players join the National Basketball Association.

The NBA has 29 teams with 12-man rosters, for a total of **348** positions in professional basketball.

As of 1996, only **4** individuals had ever joined the pros without going to college first.

The average life span of basketball players in the pros is under 6 years. (Career usually begins at 22—is over at 28.)

Average salary (as of 1996) is $1.6 million.

Minimum salary (1996) is $200,000.

ACTIVITY 1
STOCK PORTFOLIO CASE STUDIES

Name ______________________________ **Date** ______________________________

What the Stock Buyers Did

In December of 1994, **Individual A** had $20,000 to use to purchase stocks. He decided to purchase one stock. He purchased 1500 shares of Kmart stock at 13⅜.

At the same time, **Individual B** also had $20,000 to use to purchase stocks She decided to diversify, to spread her stock purchases over several industries. She purchased two retail stocks, one communication stock, and one utility stock. Her purchases included 250 shares of Kmart at 13⅜, 250 shares of Sears at 24, 200 shares of MCI Communications at 21¼, and 250 of Great Lakes Gas and Power at 25⅞.

Calculate the initial investments (amount spent to purchase each stock), the total for each purchaser, and complete column A. (Ignore the broker's commission for this exercise.)

Chart 1

				A	B	C
Stock Buyer A Portfolio	**Number of shares**	**Stock**	**'94 price**	**Initial Investment**	**'95 price**	**'95 Value of Investment**
	1,500	Kmart	13⅜			
Total						
Stock Buyer B Portfolio	250	Kmart	13⅜			
	250	Sears	24			
	200	MCI Comm.	21¼			
	250	GLG&P	25⅞			
Total						

What the Year and Stocks Did

Unfortunately, the retail markets had a bad year. Even the seasonal shopping for Christmas couldn't help the slumping retail industry. Stocks in these companies dropped or were flat, showing no real growth in 1995. Sears was an exception, probably because of extremely aggressive merchandising and advertising. MCI communications was relatively flat, but had a modest increase. Great Lakes Gas and Power, a utility stock, did not experience significant growth, but utilities rarely do. This industry's stocks, often called defensive stocks, can usually be counted on to be stable—no significant growth or decline. Investors usually buy them for the long run.

ACTIVITY 1 (CONTINUED)

Percentage Change in the Price of Stocks

Find the percentage change in price from 1994 to 1995; then complete Chart 2. In order to find the percentage difference, you divide the amount of change by the original price. For example, the difference in price for Kmart from $13⅜ in '94 to 7⅛ in '95 is 6¼ or 6.25. You will have to convert the fractions to decimals.

$$\frac{\text{Amount of Change from the Original Price}}{\text{Original Price}} \times 100 = \text{percetnage change}$$

6.25/13.375 X 100 = percentage change

Complete the calculations. Indicate whether the change is an increase or decrease.

Chart 2

Stock	Price Dec. 1994	Price Dec. 1995	Difference in Price	Percentage Change
Kmart	13⅜	7⅛		
Sears	24	39		
MCI Comm.	21¼	22¼		
GLG&P	25⅞	28⅜		
Total				

What They Have Left

Because of the change in the price of stock, the value of the portfolios has changed. In Chart 1, fill in column B, calculate the value of the portfolios in 1995, and complete column C. Calculate the percentage change of each investment portfolio below.

1. What was the percentage change in A's investments from 1994 to 1995? ________________
2. What was the percentage change in B's investments from 1994 to 1995? ________________

Compare the Two Investment Strategies

3. Who had the better return on investment? Why? ________________________________
____
4. What advantage did B have in diversification? Explain. ________________________
____
5. What if A had put all his eggs into the Sears basket instead of Kmart? ________________
____
6. Evaluate the risk of each strategy. ________________________________
____

ACTIVITY 2
A TALE OF TWO TECHNIQUES

Name ______________________________ **Date** ______________________________

This is the story of Juan and Carlos. Both boys loved the game of basketball almost more than anything else. When they were young, their parents would have to drag them off the court when it got dark. As they grew up, the two friends were inseparable. They took the rock to the court every opportunity they got. They worked on their handles, worked especially hard on treys, and always got in the paint to jam. Shot after shot, they knew it was money. And it paid off. They were good—really good. Their high school team took the state championship, and both were named to the All-Star team. Life was good.

Juan knew that as much as he loved basketball, he had to get an education as well, so he studied in high school and even took some advanced classes to prepare him for college. He also loved music and somehow found time to learn to play the piano. Jazz was his favorite, but he could do a real number on classical compositions. Central State College was impressed, mostly with his athletic ability, and offered him a full scholarship, which included basketball. Life was good.

Juan thought his major in business and finance would help him manage all the money he planned on making once he hit the pros. He enjoyed his minor in speech and public relations. After all, working with the public would be a useful skill after his years in the NBA, he reasoned. Juan's college athletics were promising, as he avoided injuries and played all four years. In college, he received expert coaching, competed on a much higher level than in high school, and had a chance to practice and perfect his craft. But, despite his talent and desire, he just wasn't good enough for the pros. Juan was disappointed because his dream had always been to play in the NBA. But now he had a college degree, other skills and interests, an engaging personality, and a network of friends. He was offered and accepted a good job upon graduation. He still does the hoops with friends and coaches in the community center, but his job and family don't leave him a lot of spare time. Life is busy, but it's good.

Juan runs into Carlos occasionally. Carlos did OK in high school during the marking periods needed to maintain eligibility for basketball, but for the rest of the time he neglected his studies. All he wanted to do was play basketball and get better and better so he could play for the pros. He figured that with a pro's salary, he wouldn't need an education. Unfortunately, Carlos' grades were too low to get him into college, although he was an excellent athlete—even better than Juan. He kept hoping for a break, but it didn't happen. He could have been good at a lot of jobs, but he didn't have an education. When Juan and Carlos talk, Carlos seems to be between jobs or just working until something better comes along. Life is not so good.

Questions for Discussion

1. List the investments each made to his own personal portfolio. How did each person add to his human capital? ____
____
____

2. How did the investment pay off for each? ____
____
____

ACTIVITY 2 (CONTINUED)

3. Which one was better equipped to handle the future? Why? ____________________

4. Compare the two personal portfolios. How does this comparison illustrate the idea of diversification? Of putting all your eggs into one basket? Of risk? ____________________

5. How are you investing in your human capital? ____________________

6. How are you diversifying your investments in human capital? ____________________

ACTIVITY 3
IS EDUCATION A GOOD INVESTMENT?

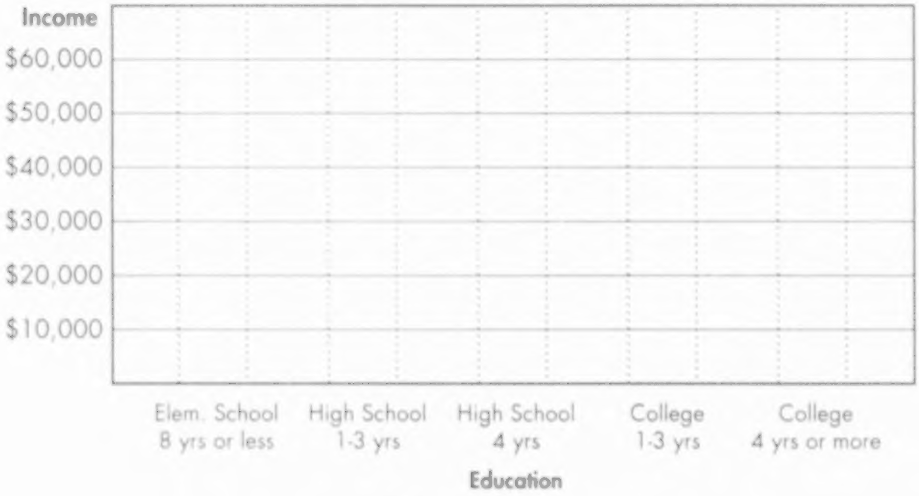
Name ______________________ **Date** ______________________

Social scientists have long noted the positive relationship between education and income. Put simply, individuals who have invested in education earn more money than individuals who have not. Human capital consists of the skills and knowledge that an individual uses to produce goods and services. Human capital is developed by investing time, money, and energy in the acquisition of new skills that enable us to be more productive. By investing in ourselves, we expect to become more productive and to gain a higher income, greater job satisfaction, and better professional opportunities.

Use the following information to complete a bar graph on the relationship between years of education completed and annual median income in the United States. Use this information to answer questions 1-7 below.

Educational Attainment of Householder	Median Income (dollars)
A. Elementary school: 8 years or less	13,523
B. High School: 1-3 years	18,191
C. High School: 4 years	28,744
D. College: 1-3 years	35,724
E. College: 4 years or more	50,549

Education and Income Graph



ACTIVITY 2 (CONTINUED)

1. Describe the relationship between education and income. Does education pay?

2. How much more may a high school graduate expect to earn per year than an 11th grade dropout?

3. Assuming a 40-year work life and no pay raises, how much more might a high school graduate expect to earn over a lifetime than an 11th grade dropout?

4. Does it pay to stay in high school one more year and graduate? Explain.

5. Assuming a 40-year work life and no pay raises, how much more might a college graduate expect to earn than a high school graduate over a lifetime?

6. How is education an example of investing in human capital?

7. Is education a good investment for your personal portfolio?

LESSON 16
PLAYING ALONG WITH THE AVERAGES

INTRODUCTION

The stock market averages are reported every day by the media to show how the markets performed. This lesson will describe those market averages and explain why the performance of a particular stock may not conform to changes in the market average.

ECONOMICS BACKGROUND

Changes in the price of a particular stock involve a change in the supply and demand for that stock. Market averages do not provide a good guideline for predicting the performance of any given stock. Investors must research factors influencing particular stocks to pick stocks that will rise in price and to avoid stocks whose prices fall.

LANGUAGE OF ECONOMICS

Demand (for stocks): The various quantities of stock people are willing and able to buy at different possible prices.

Market: The process through which buyers and sellers exchange with each other.

Supply (of stocks): The various quantities of stock that people will offer for sale at different possible prices.

CROSS CURRICULUM SKILLS

Students use computation to solve problems, compute and analyze averages in problem situations, and analyze percents of increase.

OBJECTIVES

1. Students identify the different stock market averages reported by the news media.

2. Students identify differences between two different stock market indexes used to measure the performance of the stock markets.

3. Students recognize why stock market averages are not good indicators of the performance of individual stocks.

MATERIALS

- ◆ Visuals 1, 2, 3, 4, 5, 6, and 7
- ◆ A bowl of warm water and a bowl of ice water

TIME REQUIRED

One class period

PROCEDURE

A. Explain to the students that they are going to learn what the different stock market indexes are and how information from different indexes might be useful to investors.

B. Display Visuals 1-5. Ask the students to note the different companies in each index. Explain that these indexes report stock prices in each of the four stock markets. Ask: What do you think will happen to the percentage change in these indexes on the same day? Will they be the same or different? *(Because different stocks are chosen to make up each index, the percentage changes should be different every day.)*

C. Show students Visual 6, *Comparing Index Changes*. Explain that in 1995 the general rise in the stock market was led by technology stocks for relatively new companies listed on the Nasdaq Stock Market. Ask students why the Dow Jones and Nasdaq index averages did not rise at the same rate. *(Individual stock prices change at different rates. When indexes use different stocks to calculate an average, the indexes will not measure the same degree of change.)*

D. Suggest to students that they follow an index that is closely related to their stocks. Then suggest that they remain skeptical of any index or average because it will not accurately reflect price changes in the particular stocks they own. To demonstrate that point, the class will do a few *Are you an average thinker?* experiments.

E. ✎ Ask students to participate in a few averages experiments.

   1. One small group should solve the following problem: If stock market club has 20 mem-

bers, with 10 in the 10th grade and 10 in the 12th grade, what is the average grade level of the members?
(11th grade)

2. One small group should solve the following problem: For a stock market club with 20 members, of whom 19 members have $1 to invest and 1 member has $999,981 to invest, what is the average investment contribution per member in the club?
($50,000)

3. Put a bowl of hot water and a bowl of ice water on a table in front of the classroom. Ask one student to put her hands into the water, one into each bowl. Ask if she is comfortable. If she says she is not comfortable have her explain the problem—after all, the average water temperature in the bowls is moderate.
(She does not feel an average. She feels the two extreme temperatures. The average is a false indicator of temperature in this situation.)

F. Ask students to describe the problem with Average Thinking.
(Averages mask extremes. By adding the highs and the lows and dividing, we get a number that is unlikely to reflect the frequent or usual occurrence. Rarely are fractions, people, or stock prices average.)

G. Optional activity. Show students Visual 7, *What Is an Index?* After reading Visual 7, ask them to answer the following questions:

1. How is a market index different from a market average?
(An index measures only a sample of market stocks to gain its measurement. An average would include all stocks listed on the market exchange.)

2. What is meant by applying different "weights" to different sectors?
(You give the most important sectors "weight" in your calculations to increasing their value more than the others. For example, a teacher may weight a student's final examination grade more than other tests. Each test has 25 questions, but the final test questions are worth 4 points while the other test questions are worth 1 point. Four stocks in an index may all have changed plus $2, but if one stock is weighted double the index will show a larger increase than if it had not been weighted double.)

H. When would an index average reflect your investment success accurately?
(If you owned the same stocks used in the index calculation and the same mix of stocks used in the index calculation, your investments would move at the same rate as the index. Remind students they can buy mutual funds that reflect the same changes as the stock market indexes. These are called indexed funds.)

CLOSURE

Review the main points of the lesson:

1. Several different indexes report the general level of stock prices. We looked at the Dow Jones Industrial Average, the S&P 500, The Nasdaq Composite, and the AMEX Composite.

2. Stock buyers follow changes in the indexes to see how the stock market as a whole is changing.

3. Individual stocks move at rates that differ from the general indexes.

4. Averages can be misleading.

ASSESSMENT

Multiple Choice Questions

1. Which of the following indexes does not measure the performance of stocks in one of the major stock exchanges?
   *a. Consumer Price Index
   b. Dow Jones Industrial Average
   c. Nasdaq Composite
   d. S&P 500

2. Five different stocks have the following prices: Stock A = $10, Stock B = $10, Stock C = $10, Stock D = $10, Stock E = $100. What is the average price of these five stocks?

a. $10
b. $100
c. $55
*d. $28

ESSAY

✍ A friend of yours makes the following comment: "I could make money in the stock market easily. Just wait for a time when the Dow Jones Average begins to rise. Buy a cheap stock and watch its price rise as the DJ Average rises. Sell the stock as soon as the Dow Jones Average begins to fall. What is so hard about playing the stock market?" Explain to your friend why this strategy might not work.
(*First, an individual stock might not move in the same direction as the average. Even during rising stock markets, individual stocks may fall. Second, picking a cheap stock could cause a problem. Stocks are often cheap for a good reason. It may be a stock that is underperforming the market, and it may continue to do so. Third, it is hard to know when an average is going to rise for a long period of time and when it will begin to fall. Predicting the movement of the average in the future is difficult to do.*)

JOURNAL

✍ Track the Dow Jones Average for one week. Take note of the percentage change in the index; compare that change to the price changes of your stocks and explain why the two rates of change are different.

✍ Graph out all four of the indexes for 1 to 4 weeks. Compare to see if the graphs are similar at the end of the time period and if the trends were similar during the time period.

VISUAL 1
STOCK MARKET INDEXES

Dow Jones Industrial Average: An average of 30 industrial stock prices used to indicate the general level of stock prices in the New York Stock Exchange.

The S&P 500: An average of 500 popular stock prices used to indicate the general level of stock prices in the New York Stock Exchange.

Nasdaq Composite Index: A snapshot of the ups and downs of the more than 5,000 companies listed on The Nasdaq Stock Market. Each company affects the index in proportion to its size, which means bigger companies have more of an impact than do smaller ones.

AMEX: An average of several representative stock prices used to indicate the general level of stock prices in the American Stock Exchange.

VISUAL 2
DOW JONES INDUSTRIALS

1. AT&T Corporation
2. Allied Signal
3. Alcoa
4. American Express
5. Bethlehem Steel Corp.
6. Boeing Company
7. Caterpillar, Inc.
8. Chevron Corp.
9. Coca-Cola Company
10. Disney Company
11. DuPont
12. Eastman Kodak Co.
13. Exxon Corporation
14. General Electric Co.
15. General Motors Corp.
16. Goodyear Tire & Rubber Co.
17. IBM
18. International Paper Company
19. McDonald Corporation
20. Merck and Company
21. Minn. Mining & Manu.
22. JP Morgan
23. Philip Morris Companies, Inc
24. Procter & Gamble Company
25. Sears, Roebuck & Company
26. Texaco, Inc.
27. Union Carbide Corp.
28. United Tech Corp.
29. Westinghouse Electric Co.
30. Woolworth Corporation

VISUAL 3
30 STOCKS IN THE S&P 500

1. Abbot Laboratories
2. Advanced Micro Devices
3. Aetna Life & Casuality
4. AirTouch Communic.
5. Bally Entertainment
6. Bausch & Lomb
7. Black & Decker Corp.
8. Campbell Soup
9. Caterpillar, Inc.
10. Chrysler Corp.
11. Delta Airlines
12. Digital Equipment
13. Exxon Corporation
14. Federal Express
15. First Data Corp.
16. Green Tree Financial
17. GTE Corp.
18. Lockheed Martin
19. Microsoft Corp.
20. Micron Technology
21. Nike, Inc.
22. PepsiCo, Inc.
23. Reebok International
24. Sears, Roebuck & Co.
25. 3Com Corp.
26. Unisys Corp.
27. Viacom
28. Wal-Mart Stores
29. Xerox Corp.
30. Yellow Corp.

VISUAL 4

20 STOCKS IN THE AMERICAN STOCK EXCHANGE COMPOSITE

1. Action Industries
2. Cable Vision
3. Digital Commun.
4. Financial Fed. Corp.
5. Genovese Drug Stores, Inc.
6. Hasbro, Inc.
7. Interdigital Communications
8. Kinark Corp.
9. Laser Industries
10. Maxxam, Inc.
11. Ohio Art
12. PLC Systems, Inc.
13. Rio Algom Limited
14. Saga Communication, Inc.
15. Thermo Instrument Systems, Inc.
16. Trans World Airlines (TWA)
17. UTI Energy
18. Vulcan Corp.
19. Wesco Financial
20. Ziegler Companies

VISUAL 5
18 STOCKS IN THE NASDAQ COMPOSITE

1. Acclaim Entertainment, Inc.
2. Ben and Jerry's Homemade
3. Boston Chicken, Inc.
4. Cirrus Logic, Inc.
5. Dell Computer Corp.
6. General Nutrition Companies
7. Intel Corporation
8. Intuit, Inc.
9. Micron Electronics, Inc.
10. Microsoft Corporation
11. NEXTEL Communications
12. Nordstrom, Inc.
13. Outback Steakhouse, Inc.
14. Oxford Health Plans, Inc.
15. Parametric Technology
16. Staples, Inc.
17. U.S. Robotics Corp.
18. Trak Auto

VISUAL 6

COMPARING INDEX CHANGES

	Nasdaq Index	**Dow Jones Industrial**
December 15, 1994	729.07	3807.19
December 15, 1995	1030.48	5176.73
Percent change	41.34	35.97

Why did the two indexes change at different rates during the same time period?

VISUAL 7
WHAT IS AN INDEX?

While a market (e.g., NYSE, Nasdaq, or AMEX) lists all stocks, an index *often* comprises only a small subset of stocks. In general, when creating an index, the economy is divided into different sectors, such as semiconductors, airlines, footwear, retailers, software, trucking, etc. Once the appropriate sectors are created, leading stocks in those sectors will be chosen to include in the index.

There is no explicit formula used to develop an index. In general, most indexes are made up of stocks from a given sector, but each index applies different weights. When creating an index, you need to determine (a) what sectors to use, (b) how many stocks to use within each sector, and (c) the percentage or weight given to each sector.

LESSON 17
THE MARKET-GO-ROUND

INTRODUCTION

In this lesson, students learn about interdependence in a market economy. This interdependence is illustrated by the circular-flow of resources, goods, services, and money payments. Then students learn about the importance of saving, investment, and financial markets to the circular-flow of a dynamic market economy.

ECONOMICS BACKGROUND

Economists use the circular-flow model as a tool for understanding how the U.S. economy or any other market-based economy operates. The circular-flow model has two economic actors (households and business firms) and two markets (the product market and the resource market). Land, labor, capital, and entrepreneurship are bought and sold in the resource market. Goods and services are bought and sold in the product market. Resource and product markets do not have a single location. Rather, there are millions of resource and product markets. The prices in these markets reflect the interaction of willing buyers and willing sellers. These prices are determined by the laws of supply and demand.

Financial markets are critical in facilitating the circular flow of resources, goods, services, and money payments. Financial markets channel household savings to businesses, which use these savings for real investments in plants and equipment. These capital goods improve productivity, which allows businesses to produce more goods and services. This economic growth creates new jobs and improves a nation's standard of living.

LANGUAGE OF ECONOMICS

Capital: Human-made resources used to produce goods and services. Capital goods are used by people to produce and distribute goods and services.

Circular-Flow Model: A model illustrating the interdependence and overall operation of a market economy. The circular-flow model is a diagram that shows how households and business firms interact with each other in the product and resource markets.

Entrepreneurship: A human resource that combines other resources to produce goods and services: the vision, ingenuity, energy, and risk-taking that people need to create and run a business.

Factors of Production: The four types of resources used to produce goods and services.

Labor: The health, strength, education, and skills of people which are used to produce goods and services.

Land: Natural resources or gifts of nature that are used to produce goods and services.

Product Markets: The markets where goods and services are bought and sold.

Resource Markets: The markets where land, labor, capital, and entrepreneurship are bought and sold.

CROSS CURRICULUM SKILLS

Students develop skills in reading, writing, speaking, and problem solving.

OBJECTIVES

1. Students explain how their ability to consume goods and services in product markets depends on their ability to earn income by selling resources in resource markets.

2. Students explain that the ability of a business to buy resources depends on its ability to sell goods and services.

3. Students illustrate economic interdependence by using the circular-flow model of resources, goods, services, and money payments.

4. Students define and provide examples of the four types of resources.

5. Students describe the role of financial markets in channeling household savings to investments in capital goods.

MATERIALS

- Visuals 1, 2, and 3
- Activities 1, 2, 3, and 4*

TIME REQUIRED

Two class periods

PROCEDURE

A. Explain to the students that in this lesson they will use a model called *circular flow* to understand the interdependence of a market economy. Furthermore, they will see how saving and investing keep the economy moving.

B. Display Visual 1, *The Circular Flow of Resources, Goods, Services, and Money Payments*, and describe the circular flow of resources, goods, services, and money payments.

C. Distribute a copy of Activity 1, *Understanding the Circular Flow of Resources, Goods, Services, and Money Payments* to each student.

D. Have the students answer the questions at the end of Activity 1, individually or in groups.

E. Go over the answers:

Answers to Activity 1:

1. a. What is a household?
(Anyone who has land, labor, capital, or entrepreneurship to sell in resource markets.)

b. What is a business firm?
(Buyers of these resources that in turn sell goods and services to resource owners in product markets.)

2. What is a product market?
(A market where finished goods and services are bought and sold.)

3. Give three examples of transactions you made this week in a product market.
(Answers will vary; any purchase of a good or service will do.)

4. What is a resource market?
(A market where the factors of production—land, labor, capital, and entrepreneurship—or economic resources are bought and sold.)

5. Give an example of a transaction you or your family made this month in the resource markets.
(It probably would be wages for labor, although many other transactions are possible.)

6. What determines the prices of goods and services in the product markets?
(Supply and demand)

7. What determines the prices of land, labor, capital, and entrepreneurship in the resource markets?
(Supply and demand)

8. Where do households get the money to buy goods and services in the product markets?
(From selling their resources—land, labor, capital, and entrepreneurship.)

9. Where do business firms get the money to pay households for their land, labor, capital, and entrepreneurship in the resource markets?
(From selling the goods and services they produce with the factors of production.)

10. Why is it important to know that a market economy is characterized by interdependence?
(Interdependence is important in a market economy because people specialize and trade their products in markets for other products they need. The study of supply and demand is the study of how those markets work. Knowing about interdependence helps you understand that the well-being of households is linked to the well-being of business firms and vice versa.)

F. Now tell the students that we are going to add savings and investment to the circular flow.

G. Display Visual 2, *The Circular Flow of Resources, Goods, Services, and Money*

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*Activity 4 is adapted from *The Stock Market Game*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc. Used with permission.

Payments—With Savings and Investments, and go over the addition of saving and investing. Explain that households save money in the financial markets and that money is channeled to business firms, which use it for investment in plant and equipment. When businesses pay off their debt, households receive dividends and interest. If they lend businesses money or buy bonds, households also receive their original loan back.

H. Distribute a copy of Activity 2, *Clean Teeth and a Healthy Economy* to each student.

I. Have the students read Activity 2; answer any questions they may have.

J. Distribute a copy of Activity 3, *Pick a Channel* to each student. Have the students answer the questions.

K. Go over the answers:

a.6
b.4
c.7
d.7
e.7
f. 4
g. 2
h. 3
i. 6
j. 6

L. Now the emphasis switches to the financial markets. Project Visual 3, *The Market-Go-Round* and explain how the financial markets are necessary for businesses to develop new products, build new plants, and expand operations. Make the distinction between the primary markets, where companies sell stock and borrow from the public, and secondary markets, where investors buy and sell stocks and bonds that have already been issued.

M. Distribute Activity 4, *The Market-Go-Round*. Have the students read the handout and answer the questions at the end.

N. Go over the answers:

1. What is the difference between equity and debt?
   (*Equity is the same as ownership. Stocks represent ownership. People who buy stocks gain equity or partial ownership of the firm. Bonds represent debt by companies to bondholders. People who buy bonds lend the company money. The company must pay the loans back with interest.*)

2. What is the difference between a bond and a share of stock?
   (*Bonds represent debt. Stocks represent equity.*)

3. What does the top half of the diagram represent?
   (*The top half represents stocks.*)

4. What does the bottom half of the diagram represent?
   (*The bottom half represents bonds.*)

5. Which form of capitalization (raising money) is more popular with companies (stock or bonds)? Why?
   (*Bonds: Companies can deduct loan interest payments before paying taxes. They do not dilute ownership as they do with stocks. Stocks bring about more owners, and the profits have to be divided among more people.*)

6. If you purchase stock on the NYSE, AMEX, or Nasdaq, how much of the purchase price goes to the company whose stock you are buying?
   (*None. You are buying from other investors.*)

7. What is the purpose of stock exchanges?
   (*To provide liquidity for investors. People are more willing to buy stock if they know there is a market to sell them.*)

CLOSURE

Ask the following question: The comic strip character Pogo said, "We have met the enemy and it is us." How would this saying apply to a market economy?
(*The circular-flow diagram illustrates how interdependent the economy is. Consumers are also producers. People's income depends on the resources they can sell in resource markets. Business profits depend on the ability of business people to sell goods and services in product markets. Policies that harm households harm businesses. Policies that harm businesses harm households. Policies that disrupt the financial markets harm both households and businesses.*)

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ASSESSMENT

Multiple Choice Questions

1. The circular flow of a market economy suggests that
   - a. households and business firms are very different.
   - *b. one person's cost is someone else's income.
   - c. household spending reduces business income.
   - d. every economic unit is self-sufficient and interdependent.

2. Which of the following is NOT a resource?
   - *a. corn flakes
   - b. a computer
   - c. oil deposits
   - d. a schoolteacher

ESSAY

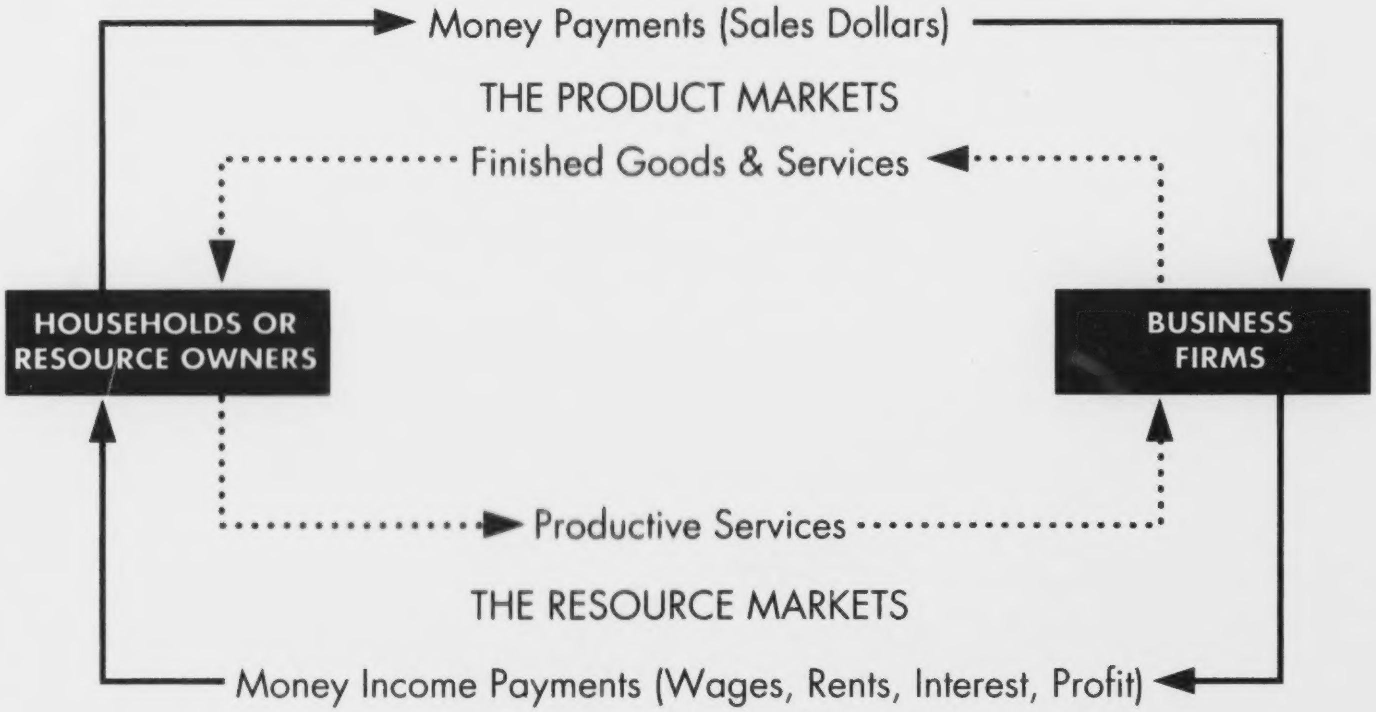
✍ What is the role of the financial markets in the circular flow of resources, goods, services, and money payments? Use some examples to make your answer concrete.
(*The financial markets move savings from households to business firms. They also channel savings from some households to other households that borrow in order to consume. Businesses use the money they receive from the financial markets to invest in capital goods. This investment improves productivity and raises our standard of living.*)

JOURNAL

✍ List four economic transactions you made during the past week. For each, tell whether the transaction took place in a product market or a resource market. How did each transaction affect households and business firms in the circular flow?

VISUAL 1

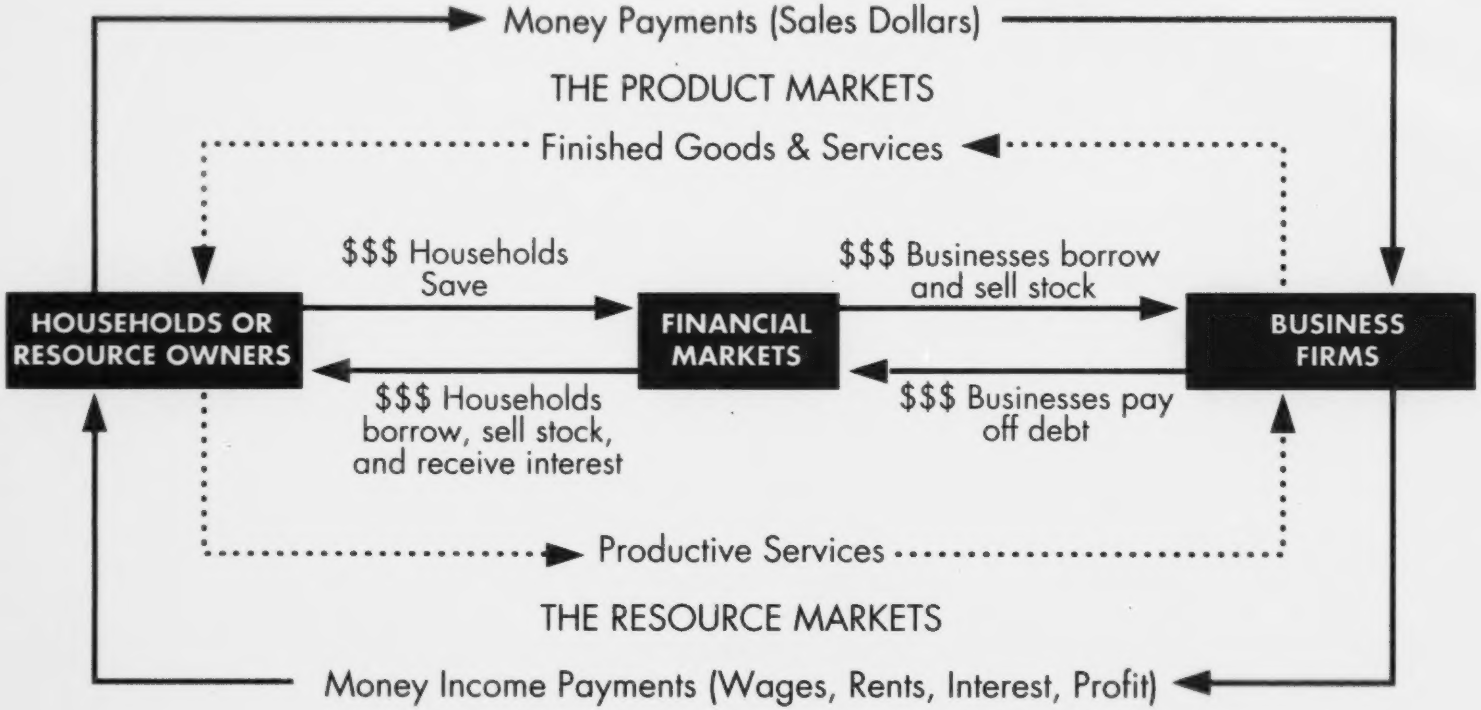
THE CIRCULAR FLOW OF RESOURCES, GOODS, SERVICES, AND MONEY PAYMENTS


Money Payments (Sales Dollars)
THE PRODUCT MARKETS
Finished Goods & Services
HOUSEHOLDS OR RESOURCE OWNERS
BUSINESS FIRMS
Productive Services
THE RESOURCE MARKETS
Money Income Payments (Wages, Rents, Interest, Profit)

From *Learning from the Market*, © National Council on Economic Education, New York, NY

VISUAL 2

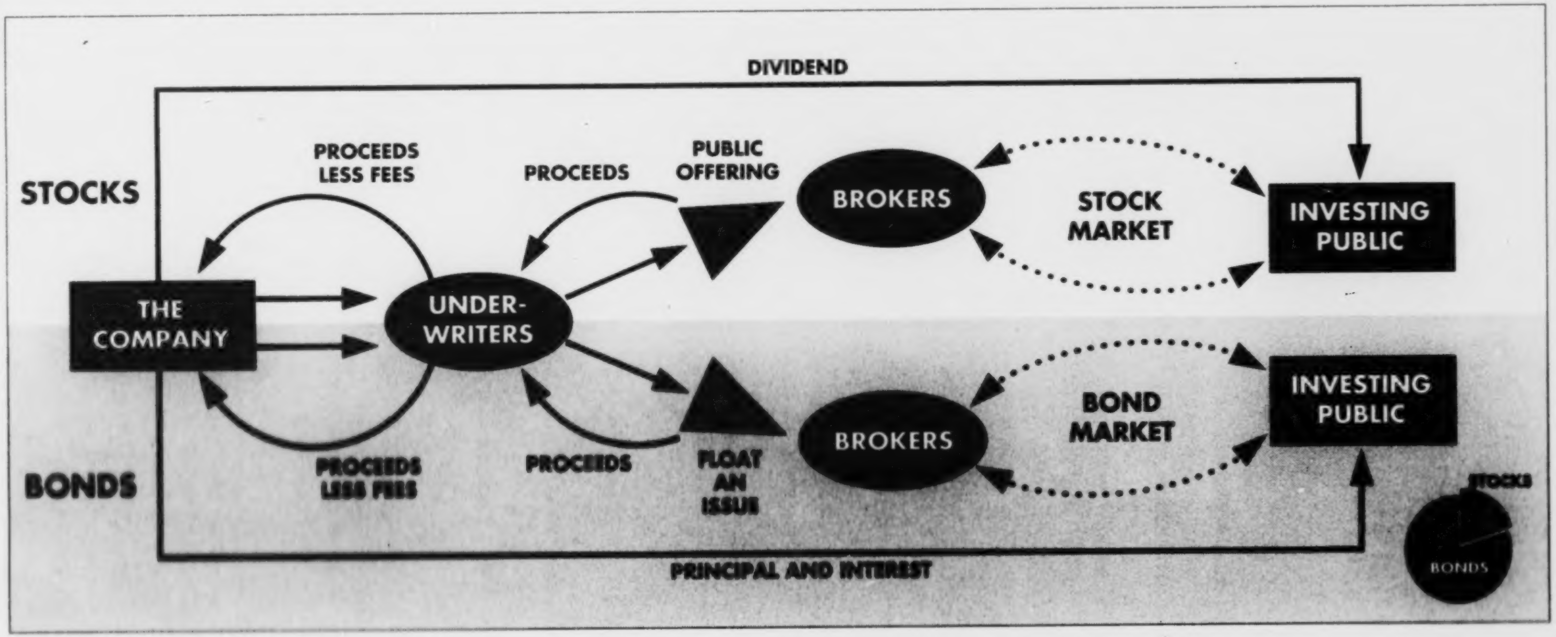
THE CIRCULAR FLOW OF RESOURCES, GOODS, SERVICES, AND MONEY PAYMENTS—WITH SAVINGS AND INVESTMENTS


Money Payments (Sales Dollars)
THE PRODUCT MARKETS
Finished Goods & Services
$$$ Households Save
$$$ Businesses borrow and sell stock
HOUSEHOLDS OR RESOURCE OWNERS
FINANCIAL MARKETS
BUSINESS FIRMS
$$$ Households borrow, sell stock, and receive interest
$$$ Businesses pay off debt
Productive Services
THE RESOURCE MARKETS
Money Income Payments (Wages, Rents, Interest, Profit)

From *Learning from the Market*, © National Council on Economic Education, New York, NY

VISUAL 3

THE MARKET-GO-ROUND*


DIVIDEND
STOCKS
PROCEEDS LESS FEES
PROCEEDS
PUBLIC OFFERING
BROKERS
STOCK MARKET
INVESTING PUBLIC
THE COMPANY
UNDER-WRITERS
BROKERS
BOND MARKET
INVESTING PUBLIC
BONDS
PROCEEDS LESS FEES
PROCEEDS
FLOAT AN ISSUE
STOCKS
BONDS
PRINCIPAL AND INTEREST

*Adapted from "The Market-Go-Round," *Wall Street Journal Classroom Edition Investor Workshop*, 1992, p.6. From *Learning from the Market*, © National Council on Economic Education, New York, NY

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ACTIVITY 1

UNDERSTANDING THE CIRCULAR FLOW OF RESOURCES, GOODS, SERVICES, AND MONEY PAYMENTS

Name ______________________________ **Date** ______________________________

One way to illustrate the overall operation of a market economy is through a circular-flow diagram such as the one provided in this Activity. This diagram presents a highly simplified overview of how a market economy operates. Households (families and individuals) supply the services of their land, labor, entrepreneurship, and capital to business firms in exchange for money income payments in the form of wages, salaries, rents, interest, and profits. Households then use these income payments to purchase the finished goods and services supplied by the business firms. Business firms then use the proceeds from these sales to pay the households for the services the firms receive by employing the resources. This is how the circular flow of resources, goods, services, and money payments is established and maintained.

The circular-flow diagram shows the interdependence of a market economy. Consumers are also producers. Households receive income from businesses. Businesses can pay households for resources because businesses sell goods and services to households. Households are both buyers and sellers. Business firms are both buyers and sellers. Money always flows in one direction while resources and products always flow in the opposite direction. Every action in the circular flow has a reaction. Prices of resources are determined by supply and demand. Let's take a closer look.

The Resource Markets

The bottom loop of the circular flow represents the resource markets. There are four kinds of resources. First, *human resources* consist of the work or labor we provide as employees. Second, *natural resources* are the gifts of nature such as water, minerals, land, and timber. Another important resource is *capital goods*, including buildings, tools, machines, and other manufactured goods used in production. The fourth type of resource is *entrepreneurship*. This is not a physical resource like a machine or an acre of land. Instead, entrepreneurship is the willingness to take the risk of operating a business and the ability to organize that business to produce what consumers want.

Each resource produces income. Most people receive wages and salaries for their labor. About 75 percent of the income earned in the United States consists of wages and salaries. The rest of the income comes from profits, rents, and interest. Some households own corporate stock and receive dividends or profits. Some households own bonds and savings accounts, which produce interest. Households that provide buildings and equipment to businesses receive rents.

The Product Markets

The top loop of the circular flow represents the product markets. In the product markets, businesses sell goods and services to households. Goods are physical things that can be bought and sold—such as pizzas, books, and computers. Services are intangible. Examples of services are concerts, medical care, and education. Businesses are able to produce and sell these goods and services to households because businesses purchase resources from those households. And so on, round and round, the process continues.

An Example

Jennifer works at Jeans World as a sales associate. Jeans World pays Jennifer for the work she does. Jennifer is in the bottom loop of the circular-flow. In the resource markets, she sells her labor for a wage. The business receives a scarce resource (labor) from Jennifer. Jennifer is a seller in the resource markets, and the owners of Jeans World are buyers in the resource markets.

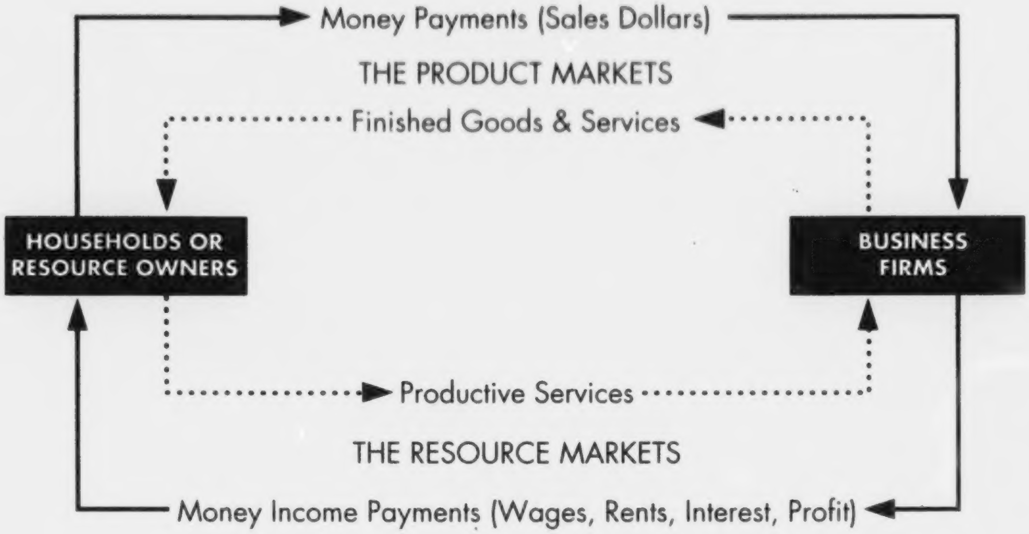
ACTIVITY 1 (CONTINUED)

Jennifer now has income. She spends some of her income on a jacket, a movie, and lunch. Jennifer is a buyer in the product markets where the jacket store, movie theater, and restaurant are sellers.

Traveling Dollars

By trading dollars in resource markets and in product markets, businesses and households cause dollars to flow in a circular fashion. First, the dollars flow through resource markets from businesses to households. Then the dollars flow through product markets from households back to businesses. With many households, resources, businesses, and products, the cycle repeats itself again and again. No wonder a market economy is described as a circular flow.

The Circular Flow of Resources, Goods, Services, and Money Payments


Money Payments (Sales Dollars)
THE PRODUCT MARKETS
Finished Goods & Services
HOUSEHOLDS OR RESOURCE OWNERS
BUSINESS FIRMS
Productive Services
THE RESOURCE MARKETS
Money Income Payments (Wages, Rents, Interest, Profit)

Questions for Discussion

Answer the following questions about the circular flow of resources, goods, services, and money payments.

1. a. What is a household? ______________________________

b. What is a business firm? ______________________________

2. What is a product market? ______________________________

ACTIVITY 1 (CONTINUED)

3. Give three examples of transactions you made this week in a product market.

4. What is a resource market?

5. Give an example of a transaction you or your family made this month in the resource markets.

6. What determines the prices of goods and services in the product markets?

7. What determines the prices of land, labor, capital, and entrepreneurship in the resource markets?

8. Where do households get the money to buy goods and services in the product markets?

9. Where do business firms get the money to pay households for their land, labor, capital, and entrepreneurship in the resource markets?

10. Why is it important to know that a market economy is characterized by interdependence?

ACTIVITY 2
CLEAN TEETH AND A HEALTHY ECONOMY

Name ______________________________ **Date** ______________________________

"Don't forget to brush your teeth!" said Mike's mother from the other room. "I know that brushing my teeth is a good investment," thought Mike as he squeezed the tube of toothpaste.

Mike stopped and wondered why he had thought of the word *investment*. Perhaps it was because at school that day his class had discussed investment. Whatever the reason, the word seemed to fit.

Mike thought again of the class discussion that day. The teacher had explained that people must first save in order for businesses to invest. "Saving," remembered Mike, "applies to money. In class the teacher defined *saving* as setting aside today's money for future use. But doesn't saving also apply to time? I could be watching TV right now instead of brushing my teeth," Mike thought, "so I'm now giving up time when I could be having fun. And I'm investing that time in brushing my teeth in order to have healthier teeth in the future. So in a way I'm saving and investing right now."

"Come to think of it," thought Mike, "I saved and invested in my part-time business. I saved money in my bank account for a long time in order to buy the electric buffer for polishing cars. I could have spent the money on food and clothes, but I saved it instead. And when I bought the electric buffer, I was investing in my business. It paid off, too," he thought. "With the new machine I now polish more cars and earn more money."

Financial Markets

Like Mike, many other people in our economy save money. You are saving whether you put some of your income in a piggy bank or in a real bank somewhere in your community. Your choice to save is an important one, too. By saving money, you are giving up spending the money on goods and services now. You consume less today so you will have more money to spend in the future. But your savings not only help you; they can also help make money available for business spending on new machines, buildings, and other capital goods. Capital goods are manufactured items used to produce goods and services. Just as Mike's new electric buffer helped him polish more cars and earn more money, other new capital tools help businesses increase their production. That means more goods and services, more jobs, and more income for people in our economy.

In Mike's business, Mike was the one who saved and invested the money. But in our economy, most of the people who save are not the same ones who invest. So savings must somehow be transferred to those who want to invest in new capital. To make this important transfer, we depend on special markets called financial markets. Here's how the transfer works.

When most people save, they open a bank account, purchase stocks, or buy some other asset that rewards them for saving. Generally, the bigger the reward, the more they save; the smaller the reward, the less they save.

For example, the money you put into a savings account at a bank can be loaned to someone who pays the bank interest for the use of that money. From that person's payments, the bank is able to pay interest to you. The borrowed money might then be used to buy capital goods. In this way, banks, brokerage houses, pension funds, and other companies in the financial markets allow people to transfer their savings to others who are willing to pay for using them.

Investment in Capital Goods

The diagram summarizes the important role of financial markets in channeling savings to businesses. The diagram is similar to the one you saw in Activity 1, but it has an additional box in the middle to show financial markets.

The diagram shows savings flowing out of households to financial markets. These are markets in

ACTIVITY 2 (CONTINUED)

which buyers and sellers exchange bank accounts, insurance policies, stocks, and other money-type assets. If you put $50 in a savings account at a bank, for instance, you are buying a savings account in the financial markets.

But the diagram also shows that some households receive savings. For example, the Smith family may deposit savings in a bank, and the bank may lend the money to the Browns to buy an automobile, appliance, or other product. Or the Smiths might go to a broker and use their savings to buy some stocks which the Browns sold to raise cash. In both examples, financial markets help transfer savings from one household to another.

What happens to the savings not returned to households? Financial markets direct this money to businesses. For example, some companies use investment bankers to issue brand-new stocks. In this way, the companies receive savings. Some companies also issue new bonds, which is a way to borrow the savings. Others borrow savings directly from commercial banks and other financial companies.

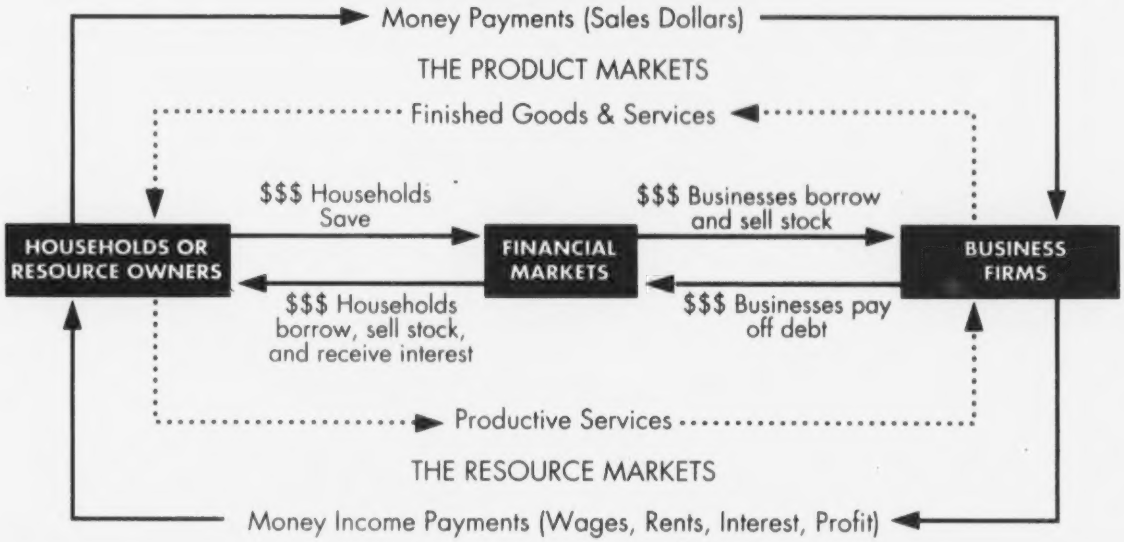
Businesses use the money they get from the financial markets to invest in new capital goods.

Here, the word "invest" does not mean the financial investment people make when they buy stocks or put money in the bank. Instead, the word means putting money into new capital goods. When businesses start new companies or expand and modernize the ones they have, they invest in new capital goods. These investments are important because they increase a company's production. And businesses that produce more raise our standard of living by providing more jobs and income for American households.

But companies couldn't make these investments if we didn't save and if financial markets didn't direct our savings to businesses that can invest them wisely. Mike saved and invested his money in an electric buffer in order to improve his business so he would earn more money. He also invested his time in order to have healthier teeth.

Thanks to financial markets, people in our economy can also save and invest their money. As a result, we enjoy a stronger and healthier economy that offers more jobs, provides more income, and produces more goods and services.

The Circular Flow of Resources, Goods, Services, and Money Payments—With Savings and Investments


Money Payments (Sales Dollars)
THE PRODUCT MARKETS
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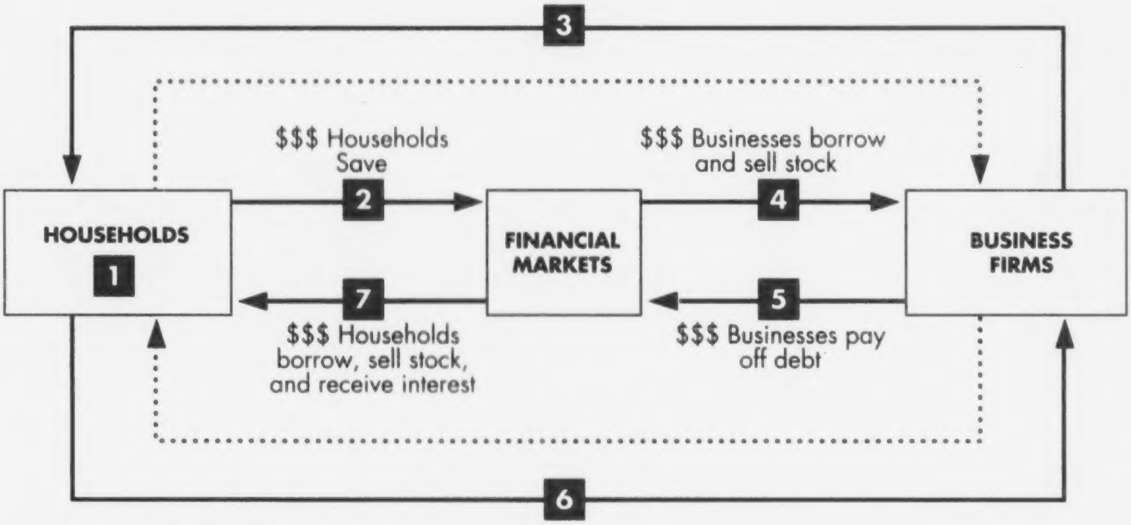
$$$ Businesses borrow and sell stock
HOUSEHOLDS OR RESOURCE OWNERS
FINANCIAL MARKETS
BUSINESS FIRMS
$$$ Households borrow, sell stock, and receive interest
$$$ Businesses pay off debt
Productive Services
THE RESOURCE MARKETS
Money Income Payments (Wages, Rents, Interest, Profit)

ACTIVITY 3
PICK A CHANNEL

Name ______________________________ **Date** ______________________________

The following diagram contains seven black boxes numbered 1 through 7. Each box identifies a part of the circular flow. Read each of the events, labeled A through J, at the bottom of the page. Decide where in the circular flow each of these events would occur. Then, in the space provided after each event, write the number of the black box that corresponds to that place in the circular flow where the event occurs. You will use some of the numbers in the black boxes more than once.


3
$$$ Households Save
2
$$$ Businesses borrow and sell stock
4
HOUSEHOLDS
1
FINANCIAL MARKETS
BUSINESS FIRMS
7
5
$$$ Households borrow, sell stock, and receive interest
$$$ Businesses pay off debt
6

a. A bakery pays employees for their work. __________

b. A restaurant chain sells bonds to borrow money for expansion. __________

c. A family borrows money from a savings and loan to buy a new home. __________

d. Tony Lopez buys $2,000 of common stock through a broker. __________

e. Marie Brown sells $2,000 of common stock through a broker. __________

f. A computer company sells 1,000,000 shares of common stock through an investment banker to raise funds for a new factory. __________

g. A student uses $50 of savings from a part-time job to open a savings account at a bank. __________

h. Terri Lawson uses $20 of her earnings to take her friends to see a popular movie. __________

i. An auto repair shop buys a new computerized scope from a manufacturing company to diagnose problems on its customers' cars. __________

j. An airplane manufacturer buys new computerized robots from a robot manufacturer for use on its assembly lines. __________

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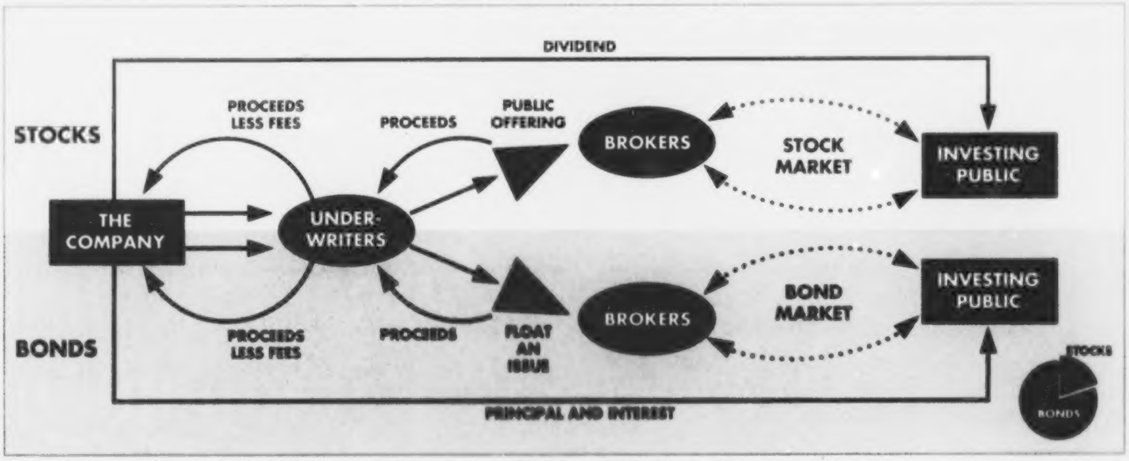
ACTIVITY 4
THE MARKET-GO-ROUND

Name ______________________ **Date** ______________________


DIVIDEND
STOCKS
PROCEEDS LESS FEES
PROCEEDS
PUBLIC OFFERING
BROKERS
STOCK MARKET
INVESTING PUBLIC
THE COMPANY
UNDER-WRITERS
INVESTING PUBLIC
BOND MARKET
BROKERS
BONDS
PROCEEDS LESS FEES
PROCEEDS
FLOAT AN ISSUE
STOCKS
BONDS
PRINCIPAL AND INTEREST

Adapted from *Wall Street Journal Classroom Edition Investor Workshop*, 1992. Used with permission.

Companies, like people, need money to finance their "lives"—to develop new products, build new plants, expand operations. Some of this money comes from company profits. Businesses also can raise money by selling stocks and bonds.

Stock represents ownership: People who buy shares gain equity, or a piece of the firm selling the shares. Bonds represent debt: People who buy bonds lend the company money (principal) that the company must pay back with interest.

Stocks vs. Bonds

Companies rarely sell stocks and bonds directly to the public. The diagram above illustrates the multi-step process companies use to sell their securities.

The diagram is divided into halves. The top half represents the procedure for stock sales; the bottom represents bonds.

This doesn't mean that the sizes of the stock and bond markets are equal, however. Companies raise far more money each year from bond sales than they do from initial public offerings of stock, as the pie chart in the bottom left corner of the diagram clearly shows.

The pie chart represents the average annual proceeds over a 10-year period from sales of newly issued corporate stocks and bonds. Corporate stock sales averaged $21 billion a year from 1981 to 1990, according to the Securities Data Co. Bond sales averaged $87 billion.

How Companies Sell Securities

Basically, companies sell stocks and bonds "wholesale" to underwriters, usually a group of investment banks. This sale is indicated by the two straight arrows at the left of the diagram, coming out of the box labeled "The Company."

Underwriters "retail" securities to investors—individuals or institutions such as insurance companies or pension funds. These sales—called a "public offering" in the case of stocks and "floating an issue" for bonds—are represented by the straight arrows coming out of the circle labeled "Underwriters."

The individuals and institutions who make up the investing public then buy and sell the securities among themselves (represented by the outer circles of dotted lines on the right side of the diagram).

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ACTIVITY 4 (CONTINUED)

These sales are generally handled through stockbrokers, financial consultants, or other investment professionals. The investment professionals and underwriters often work for the same companies, in different departments.

Companies obtain their money from proceeds of sales to underwriters (represented by the curved arrows labeled "Proceeds Less Fees" on the left). Underwriters make their money from fees companies pay to them (indicated by the curved arrows labeled "Proceeds").

Companies don't obtain any money from the resale of their securities in the market. All the money from public trading in the so-called secondary market circulates among investors and brokers and is represented by the inner circles of dotted lines on the right.

Not all investors trade. Many buy securities and hold them, making money from stock dividends (represented by the long arrow at the top of the diagram) or from company repayment of bond principal and interest (represented by the long arrow at the bottom.)
Answer the following questions based on the diagram and the reading.

1. What is the difference between equity and debt?
2. What is the difference between a bond and a share of stock?
3. What does the top half of the diagram represent?
4. What does the bottom half of the diagram represent?
5. Which form of capitalization (raising money) is more popular with companies (stock or bonds)? Why?
6. If you purchase stock on the NYSE, AMEX, or Nasdaq, how much of the purchase price goes to the company whose stock you are buying?
7. What is the purpose of stock exchanges?

LESSON 18

I'VE GOT THE WORKIN' IN THE CHALK-MARK FACTORY, INCREASING MY PRODUCTIVITY BLUES

INTRODUCTION

In this lesson, students learn about the importance of productivity in improving our standard of living. They participate in a demonstration that shows how specialization and division of labor can improve productivity. Finally, by role-playing an interview with Professor Adam Smith, they learn how productivity is vital to the growth of our standard of living.

ECONOMICS BACKGROUND

Productivity is the amount of goods and services produced for each hour of work. Increased levels of productivity are associated with improving our standard of living. Productivity and living standards could rise faster if the amount of capital goods per worker were increased. For this to happen, existing companies must invest more in expanding or in building new plants. Existing companies can raise money for expansion from their profits or they can issue new shares of stock.

LANGUAGE OF ECONOMICS

Productivity: The amount of goods and services produced for each hour of work.

Profit: The difference between revenues and the costs entailed in producing or selling a good or service; it is a return for risk-taking.

Specialization: A situation in which people concentrate their efforts in the areas where they have an advantage. Examples would include farmers in Kansas who specialize in growing wheat and farmers in Florida who specialize in growing citrus fruit.

Standard of Living: A measure of an individual's or a family's quality of life. People have higher standards of living when they have more goods and services, more leisure time, and so forth.

CROSS CURRICULUM SKILLS

Students develop reading, speaking, and listening skills. They use computation to solve problems, compute unit costs, model a situation by carrying out a simulation, and analyze the results of a simulation.

OBJECTIVES

1. Students explain the definition of *productivity*.

2. Students analyze the relationship between productivity and living standards by reference to investment in capital and research.

MATERIALS

- Visuals 1, 2, 3, and 4
- Activity 1
- Chalkboard and eight pieces of chalk

TIME REQUIRED

One class period

PROCEDURE

A. Explain that the purpose of this lesson is to analyze the relationship between productivity and our standard of living.

B. Display Visual 1, *The Scarce Resource Mystery*. Ask the students to speculate on how the amount of goods and services we are producing could be increasing when we have a limited amount of productive resources.

C. Explain that part of the solution lies in improving productivity—in making workers more productive. Display Visual 2, *Some Definitions*. Explain the definition of *productivity* and of *standard of living*. Point out that this lesson will demonstrate ways in which people can become more productive.

D. Explain that you are about to open the Chalk-Mark Factory. Draw four large circles spaced horizontally across the chalkboard. Select one student to be a worker. Give the student one piece of chalk; the student is to make as many marks as possible in the four circles in 10 seconds. However, the student must make one mark in each of the four circles before starting a second round of marks. In other words, an equal number of marks must be made in each circle during the 10-second round.

E. When the student has finished, display Visual 3, *The Chalk-Mark Factory*. Calculate the unit labor cost for Round 1 by dividing the number of marks into a hypothetical wage of $5.00. For example, if the student made 20 marks, the unit cost would be $.25.

F. Explain that you want to make some improvements at the Chalk-Mark Factory. Ask four new students come to the board and tell them that they will be performing the same task, but that you will arrange for them to do their work more productively. Assign each student to an individual circle. Tell the students to make as many marks as possible in that circle in a 10-second period. Because these workers do not have to move back and forth, they will average two or three times as many marks as the first student did.

G. When the students have finished, display Visual 3 again. Calculate the unit labor cost for Round 2.

H. Tell the students that you want to make one more improvement at the Chalk-Mark Factory. Give each of the four students from Round 2 two pieces of chalk. Once again, ask the students to make as many marks as possible in that circle in a 10-second period.

I. When the students have finished, display Visual 3 again. Calculate the unit labor cost for Round 3.

J. Ask the students to examine the numbers in Visual 3 and to draw some conclusions from these data. Remind the students that *productivity* refers to the amount of goods and services produced for each hour of work. Explain that productivity can be increased in a variety of ways. In the Chalk-Mark Factory, more goods per person were produced at lower prices by organizing the work more efficiently. Ask: What are some other ways in which chalk-mark production might be increased? (*Suggestions might include giving each worker a tool that could hold several pieces of chalk [adding physical capital], sending workers to college to get a degree in chalk-marking [improving human capital], or doing research on better ways to make chalk marks. In each case, point out that people would pursue such measures because they expect to be rewarded financially or in some other way.*)

K. Display Visual 4, *Productivity and the Stock Market*. Explain that businesses use profits or may sell new issues of stock as devices to obtain money. Then they can use the money to invest in better plants, tools, and equipment, and to increase productivity.

L. Distribute Activity 1, *Beaming Up Adam Smith*. Explain that the students are going to conduct an interview across time with Professor Adam Smith (1793-90), the founder of the study of economics. Read aloud the Scene and Background for Reporters in Activity 1 to prepare the class for working in small groups.

M. Divide the class into groups of five. Assign each group member a role as Adam Smith or one of the four reporters. (Groups with fewer than five members may wish to assign two reporter roles to one person.) Ask the students to review the questions for discussion in Activity 1. Have the students conduct the interview with Adam Smith. When they are done, ask:

1. Who was Adam Smith?
   (*Regarded as the first economist, Adam Smith published The Wealth of Nations in 1776.*)

2. What are the three ways in which a nation can increase its living standards?
   (*Adding workers, borrowing from other nations, increasing productivity*)

3. How does Smith's pin factory illustrate how productivity can be increased?
(*By allowing people to concentrate their efforts where they have an advantage, the manufacture of many products—like pins—can be made more efficient.*)

4. Besides specialization and division of labor, how can productivity be increased?
(*Rewards must be provided to people who wish to save some of their current income and invest it in activities that will increase productivity. Productivity can be increased when people invest in new plants and equipment, in education and training of workers, and in research on how to produce new goods and services.*)

5. What nation was the leader in productivity in the 19th century? in the 20th century?
(*Britain was the leader in the 19th century; the United States has been the leader in the 20th century.*)

6. How is Adam Smith's example of the pin factory similar to our experience in the Chalk-Mark Factory?
(*Both use division of labor to increase productivity.*)

CLOSURE

Review the key points of the lesson:
What is productivity?
(*Productivity is the amount of goods and services produced for each hour of work.*)

What is the standard of living?
(*A measure of an individual's or a family's quality of life. People have higher standards of living when they have more goods and services, more leisure time, and so forth.*)

What are some ways of increasing the level of productivity?
(*Rewards must be provided to people who wish to save some of their current income and invest it in activities that will increase productivity. Productivity can be improved through specialization and division of labor. Productivity can be increased when people invest in new plants and equipment, in education and training of workers, and in research on how to produce new goods and services.*)

ASSESSMENT

Multiple Choice Questions

1. Increasing specialization and division of labor within a business will likely cause the unit cost of labor to
   a. increase.
   *b. decrease.
   c. remain the same.
   d. either a or c.

2. To experience gains in productivity, an economy must increase investment in
   a. tools and equipment.
   b. education and training.
   c. research and development.
   *d. all of these.

ESSAY

✍ You see them every day. Supermarket clerks busily use electronic scanners to enter prices into computers. In turn, computers keep track of the store's transactions, often keep track of inventories, and conveniently tell how much change is owed the customer. Have you thought of scanners as devices to increase productivity? Explain how electronic scanners increase productivity and reduce costs.
(*Electronic scanners allow clerks to check out goods more quickly and with fewer errors than by use of old-fashioned cash registers. Serving more customers more quickly means that the cost of serving each customer is reduced. In other words, the substitution of scanners for cash registers makes the clerk more productive.*)

JOURNAL

✍ Over the past 20 years, computers have contributed greatly to increases in productivity. During the next week, keep track of each instance in which you observe somebody using a computer. (You can count youself, too.) Alongside each observation that you record, record a speculation: tell how you think this use of a computer may be increasing the person's productivity. Explain each speculation briefly.

VISUAL 1
THE SCARCE RESOURCE MYSTERY

Our resources are limited. We only have so much land, labor, and machines. Yet in several recent years, the United States economy has grown. In fact, Americans in recent years have produced more goods and services than at any time in the past. Since our resources are scarce, how can the amount of goods and services we are producing be increasing?

VISUAL 2
SOME DEFINITIONS

Productivity: The amount of goods and services produced for each hour of work.

Standard of Living: A measure of an individual's or a family's quality of life. People have higher standards of living when they have more goods and services, more leisure time, and so forth.

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VISUAL 3
THE CHALK-MARK FACTORY

Round	Wage	Number of marks produced	Average cost per mark
1			
2			
3			

VISUAL 4
PRODUCTIVITY AND THE STOCK MARKET

Where do businesses get the money to invest in expansion and improvement with better plants, tools, and equipment?

Businesses can obtain money for investment by using profits.

Businesses can obtain money for investment by selling new issues of stocks.

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ACTIVITY 1
BEAMING UP ADAM SMITH

Name ______________________________ **Date** ______________________________

Scene
Scientists at the University of Wisconsin in cooperation with the University of Glasgow in Scotland have developed a device called the Time Warp Traveler (TWT). The device allows scientists to bring people from the past into the present. Today, reporters have been invited to interview Adam Smith, who lived from 1723 to 1790. The topic of today's interview is productivity.

Background for Reporters
Today you are interviewing Adam Smith. Smith was born in Kirkaldy, Scotland, in 1723. He studied at the University of Glasgow and at Oxford. He was professor of Logic and then of Moral Philosophy at Glasgow. He became Commissioner of Customs for Scotland in 1777 and spent his remaining years at Edinburgh. He never married. He spent 10 years writing *An Inquiry Into the Nature and Causes of the Wealth of Nations.* Published in 1776, *The Wealth of Nations* explains how a competitive, private economy works and describes the role of government in an economy. It was the first such account of markets and government, and Smith therefore is widely regarded as the founder of modern economic thought. People who knew him, in addition to commenting on his charm and intelligence, also observed that Smith was the epitome of the absent-minded professor. There are reports that he would get lost on long walks near his home and forget about things that he had just done.

REPORTER 1 Professor Smith, I am sure I speak for my colleagues today as I offer you a warm welcome to our 20th century. I am sure that our world holds many surprises for you.

PROFESSOR SMITH It is a great pleasure for me to be speaking with you and your colleagues. And of course I have been very surprised, even shocked by some of the differences between life in your century and life in my own. And yet, as I have learned more about how your modern economies work, I am pleased to tell you that people act in ways which are very understandable to me.

REPORTER 2 Professor Smith, one of the questions we are studying is how, in a world of scarcity, a modern economy can still improve living standards. Can you give us your explanation?

PROFESSOR SMITH I would like to remind you of the words of two 20th century economists, William J. Baumol and Sue Anne Blackburn. In their book, *Productivity and American Leadership*, they wrote, "It can be said without exaggeration that in the long run probably nothing is as important for economic welfare as the rate of productivity growth." I agree completely with this modern statement of an 18th century principle.

REPORTER 3 Professor Smith, please explain exactly how a nation can increase its standard of living.

PROFESSOR SMITH Gains in living standards can be made in three ways. First, we can put a bigger proportion of people to work. Since 1970, many women in the United States have chosen to enter the workforce. Second, a country can borrow resources from other nations to pay for the goods it imports. This can increase the amount of goods and service produced per person. Finally, and most importantly, a nation can boost productivity by investing a bigger share of its income in plants and equipment, education and training, or by investing in research that may lead to finding new ways to produce the things that people want.

ACTIVITY 1 (CONTINUED)

Reporter 4 Professor Smith, you are famous for your example of how specialization and division of labor can increase productivity? Can you explain this point to us?

Professor Smith Of course. In my book *The Wealth of Nations*, I describe how production in a pin factory can be improved. One person working alone making a pin would be lucky to make 20 pins per day. However, you may be surprised to learn that there are many tasks involved in the production of a simple pin. I estimate that there are 18 different operations. By dividing the tasks among workers, production can be increased and the costs decreased. For example, in our pin factory we might assign one worker to draw out the wire for the pin, another to straighten it, a third to sharpen the point, a fourth to grind it at the top for receiving the head, and so on. I estimate that by hiring more workers and allowing them to concentrate their efforts at what they are good at, 10 people could make 48,000 pins in a day. I freely admit that pin-making may be a trifling example, especially in the eyes of someone living in the 20th century. However, it is easy to see the effect of specialization and division of labor in making a business more productive. I could give many examples more complicated than pin-making.

Reporter 1 Besides specialization and division of labor, what are the other ways to increase productivity?

Professor Smith Most important is that rewards must be provided to people who wish to save some of their current income and invest it in activities that will increase productivity. For example, allowing people to keep the earnings from stocks they own provides a type of reward. Another reward is allowing people to keep the interest earned from bonds. Three types of investing are most important. First, resources should be invested in new plants and equipment. Second, resources should be invested in education and training of workers. Finally, resources should be invested in research about how to produce new goods and services.

Reporter 2 Professor Smith, I know that you have studied the history of many of the nations of the world. What nations have the best productivity records?

Professor Smith The people of northern Italy were the productivity leaders from the 13th to the 16th centuries. The Dutch republic led in the 17th and 18th centuries. Britain became the world leader in the late 18th century and held the lead through most of the 19th century. The United States has been the leader for all of the 20th century. In the United States, labor productivity has averaged about 2 percent a year for the 20th century. That means living standards have doubled, on average, every 35 years.

Reporter 3 Professor Smith, I see that our time together is about to end. I wish to thank you very much for granting this interview.

Professor Smith It has been a pleasure. Please invite me back to your century again. Now, in order to get back to 1776 I need to find that Time Warp contraption.... I know I put it around here somewhere....

Reporter 3 Thank you, Professor Smith.

ACTIVITY 1 (CONTINUED)

Questions for Discussion

1. Who was Adam Smith?
2. What are the three ways in which a nation can increase its living standards?
3. Explain how Smith's pin factory illustrates how productivity can be increased.
4. Besides specialization and division of labor, how can productivity be increased?
5. What nation was the leader in productivity in the 19th century? in the 20th century?
6. How is Adam Smith's example of the pin factory similar to our experience in the Chalk-Mark Factory?

LESSON 19

HOW DO SAVING AND INVESTMENT AFFECT ECONOMIC GROWTH?

INTRODUCTION

In this lesson, students learn about the relationship between saving, investing, and economic growth. Serving in the role of members of a worldwide investment firm, they predict which nations are likely to have the most prosperous economy. They study factors related to economic growth including investing in human and physical capital and openness to trade. Finally, they rate the risks associated with investment in several nations.

ECONOMICS BACKGROUND

Students often believe, mistakenly, that a nation's endowment of natural resources is its primary source of wealth. For example, many students in the United States think the United States is a wealthy country because of its natural resources. In this lesson students learn that saving—setting aside today's income for future spending—and investing in physical and human capital are important ways to encourage economic growth. They also learn that protection of private property, low tax levels, and international trade also encourage economic growth.

LANGUAGE OF ECONOMICS

Capital: Human-made resources used to produce goods and services. Capital goods are used by people to produce and distribute goods and services.

Economic Growth: An increase in an economy's output.

Human Capital: The skills, knowledge, and experience that enable people to be productive.

Investment: The putting to use of money, capital, or time in the hope of getting a profitable return.

Private Property Rights: Laws or customs that allow individuals to retain the benefits of property ownership for private use.

Saving: Setting aside some of today's income for future spending.

CROSS CURRICULUM SKILLS

Students develop skills in reading, speaking, and listening. They interpret and analyze a table of data.

OBJECTIVES

1. Students describe the relationship between saving and investment in capital goods and economic growth.

2. Students explain the role of securities markets in moving savings to new or expanding businesses.

MATERIALS

- Visuals 1 and 2
- Activities 1, 2, and 3

TIME REQUIRED

One class period

PROCEDURE

A. Explain that the purpose of this lesson is to help students understand why some nations achieve economic growth while others do not. Display Visual 1, *Who Is Wealthy?* Invite the students to speculate on reasons that economic development occurs in some nations and not in others.

B. Explain to the students that they are going to play the role of investors trying to decide in what nation's firms they would like to purchase stocks. Distribute Activity 1, *Staff Report 1*, and divide the class into groups. Ask each group to decide whether to purchase stocks in businesses in any of the five nations listed and to discuss reasons for their decision.

C. When the groups have completed this work, ask a representative from each group to present the group's decisions and reasons to the class. Display Visual 2, *Mystery Countries*.

Explain that National Product Per Capita is a measure of the total value of the final goods and services produced within a nation's borders divided by the nation's population. Ask the students to explain how some nations with vast natural resources—such as Argentina and Russia—have relatively low incomes, while other nations which have almost no natural resources—such as Japan and Hong Kong—have relatively high incomes. Point out that factors commonly associated with economic growth, such as having abundant natural resources and land, are less important to economic development than other factors. The United States is indeed a wealthy nation, but this has less to do with the existence of natural resources than with its market economy.

D. Explain that the Research Department at We Call 'Em Like We See 'Em has prepared a memo for the members of the Investment Committee to help them understand more about the factors associated with economic growth. Distribute Activity 2, *Staff Report 2*, to the class. Once again, divide the class into groups. Appoint a recorder to write down the groups' responses to the Questions for Discussion.

E. When the groups have completed their work, ask:

1. What is economic growth?
   (*Economic growth is an increase in an economy's output.*)

2. What are private property rights?
   (*Private property rights enable individuals to retain the benefits of property ownership for private use.*)

3. What is the relationship of private property rights to economic growth?
   (*By allowing people to keep what they earn, private ownership rewards people for being productive.*)

4. What do you think would happen to savings levels in a nation where the government took people's money out of savings accounts every few years in order to pay its debts?
   (*People would be discouraged from saving. They would hide their savings from the government or try to move their savings out of the nation.*)

5. How are saving and investment related?
   (*Saving means setting aside today's income for future spending. When savings are spent on capital, this is investing. For an economy to grow, there must be ways to move savings into investments in physical capital and human capital.*)

6. What role is played by the securities markets?
   (*Securities markets like the New York Stock Exchange enable savers to get together with people who need money to start up or to expand businesses.*)

7. What are investments in physical capital?
   (***Physical capital** refers to human-made items used to produce and distribute goods and services. If a company uses money from a sale of bonds to buy new copy machines, for example, it invests in physical capital.*)

8. What are investments in human capital?
   (***Human capital** refers to the skills, knowledge, and experience that enable people to be productive. If a young woman uses a student loan to pay for her medical school tuition, for example, she invests in human capital.*)

9. How does the level of taxation influence economic growth?
   (*High tax rates reduce income. If the government, for example, taxes income from investments at a high level, people will choose to make few investments.*)

10. How does openness to trade influence economic growth?
    (*Open trade allows citizens to gain access to the best goods at the lowest prices, encourages businesses to find new markets for their products, and stimulates the growth of businesses that employ many workers for export markets. Trade also keeps competition high in the economy.*)

11. Name one good or service made in another nation that you thought was a good buy.
(Accept a variety of responses; cars, clothing, and electronics might be common examples.)

12. Name a good or service that United States firms export.
(Accept a variety of responses; airplanes, computers, agricultural products, rock music, and financial services might be some examples.)

F. Announce to the class that the time has come for the members of the Investment Committee to practice their skills by making investment recommendations. Distribute Activity 3, *Picking Winners and Losers*, to the class. Once again, assign students to groups. Now their task is to rate risks of purchasing stocks in the firms of five nations. When they have made their decisions, discuss their recommendations.
(Nation 1 is Vietnam.
It might be considered a medium risk.
Nation 2 is Estonia.
It might be considered a medium risk.
Nation 3 is Iran.
It might be considered high risk.
Nation 4 is Ethiopia.
It might be considered high risk.
Nation 5 is Canada.
It might be considered low risk.)

CLOSURE

Review the key points of the lesson:

What is economic growth?
(Economic growth is an increase in an economy's output.)

What factors are associated with economic growth?
(Protection of private property rights, investment in physical capital, investment in human capital, low levels of taxation, and openness to trade.)

What role is played by the securities markets in encouraging economic growth?
(Securities markets like the New York Stock Exchange enable savers to get together with people who need money to invest in physical or human capital for their businesses.)

ASSESSMENT

Multiple Choice Questions

1. An increase in an economy's output is called
   a. inflation.
   *b. economic growth.
   c. retained earnings.
   d. saving.

2. To experience a gain in economic growth, an economy must increase
   *a. investment in capital.
   b. taxes.
   c. natural resources.
   d. rate of inflation.

ESSAY

✍ Using an almanac, or better yet the *CIA World Fact Book* (available on many Web pages on the Internet), investigate one nation in the Americas, Europe, Asia, and the Middle East, and recommend it as a high, medium, or low risk for international stock purchasers. Use your knowledge of factors related to economic growth as you do your rankings. State your ranking and explain it in an essay.

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VISUAL 1
WHO IS WEALTHY?

Some nations of the world have become wealthy, while others have not. What do you think are the most important reasons this has been so?

VISUAL 2
MYSTERY COUNTRIES

Country Name	National Product Per Capita
1. Argentina	$7,990 (1994 est.)
2. Russia	$4,820 (1994 est.)
3. Hong Kong	$24,530 (1994 est.)
4. Japan	$20,200 (1994 est.)
5. United States	$25,850 (1994)

ACTIVITY 1
STAFF REPORT 1
WE CALL 'EM LIKE WE SEE 'EM, INC. INVESTMENT COMMITTEE

Name ______________________ **Date** ______________________

You are members of the International Investment Committee with the investment firm We Call 'Em Like We See 'Em, Inc. Your clients have provided your company with $5 million which they want you to use for the purchase of stock in businesses in other nations. Your clients want you to buy stocks in nations that already have a record of economic achievement.

Before selecting the nations in which you will buy stocks, you want to test your powers of prediction. The research department of We Call 'Em Like We See 'Em has selected nations in North America, South America, Europe, and Asia. Here is the information they have provided. Read about each nation and decide if it is a rich nation or a poor nation.

Country 1
Land area: Slightly less than three-tenths the size of the United States
Natural Resources: Rich natural resource base including fertile plains, lead, zinc, tin, copper, iron ore, manganese, petroleum, uranium
Population Size: 34 million
Labor force: 10.9 million

Question: Would you be willing to buy stocks in the businesses of this nation? Why?

Country 2
Land Area: Slightly more than 1.8 times the size of the United States
Natural Resources: Wide natural resource base including major deposits of oil, natural gas, coal, many minerals, timber
Population size: 150 million
Labor force: 85 million people

Question: Would you be willing to buy stocks in the businesses of this nation? Why?

Country 3
Land Area: Slightly less than 6 times the size of Washington, D.C.
Natural Resources: Deepwater harbor
Population size: 5.5 million
Labor force: 2.8 million

Question: Would you be willing to buy stocks in the businesses in this nation? Why?

ACTIVITY 1 (CONTINUED)

Country 4
Land Area: Slightly smaller than California
Natural Resources: Negligible mineral resources, fish
Population size: 125 million
Labor force: 66 million

Question: Would you be willing to buy stocks in the businesses in this nation? Why?

Country 5
Land Area: About one half the size of Russia
Natural Resources: Coal, copper, lead, uranium, bauxite, gold, iron, mercury, nickel, petroleum, natural gas, timber
Population size: 264 million
Labor force: 4.62 million

Question: Would you be willing to buy stocks in businesses in this nation? Why?

ACTIVITY 2

STAFF REPORT 2
WE CALL 'EM LIKE WE SEE 'EM, INC. INVESTMENT COMMITTEE

Name ____________________ **Date** ____________________

TO: Members of the Investment Committee

FROM: Research Department

RE: Factors Associated with Economic Growth

The Research Department has prepared this report in response to your questions about why some nations have achieved economic growth while others have not. We hope that this information will give you some of the background you need in picking nations that are likely to have businesses that can be economic "winners" for our clients.

Question 1: What is economic growth?
Answer: Economic growth is an increase in an economy's output.

Question 2: What are private property rights?
Answer: Private property rights allow individuals to retain the benefits of property ownership for private use. For example, individuals who have savings may keep whatever earnings they might derive from their savings. People who own farmland may keep the land *and* keep what they earn from the sale of crops. Business owners of all types may keep whatever earnings they make if their firms are fortunate enough to make a profit. By allowing people to keep what they earn, private ownership rewards people—owners and employees—for being productive.

Question 3: How are saving and investing related?
Answer: Saving means setting aside some of today's income for future spending. When savings are spent on capital, it is called investing. For an economy to grow, there must be ways to move savings into investments in physical capital and human capital. *Physical capital* refers to human-made items used to produce and distribute goods and services. Machines and transportation equipment are examples. *Human capital* refers to the skills, knowledge, and experience that enable people to be productive. Investments in public schools, for example, are investments in human capital.

Question 4: What role is played by the securities markets?
Answer: Securities markets like the New York Stock Exchange enable savers to get together with people who want money to start up or to expand businesses. Securities markets enable individuals and institutions to invest their savings in firms in the United States and around the world.

Question 5: What is involved in the protection of private property rights?
Answer: If the citizens of a nation are to benefit from private property rights, their government must strictly enforce the laws that protect private property rights. People who steal property must be swiftly caught and punished. People must be required to honor contracts they have made. Importantly, the government must also obey the law and not illegally take property from its people.

Question 6: Don't all nations today protect private property rights?
Answer: No. Some governments don't allow people to own much property at all. In North Korea, for example, 90 percent of the economy is owned by the state. State-owned industry produces 95 percent of the manufactured goods. In such a system, there is little incentive for individuals to earn from their own property. While few nations are as extreme as North Korea, many others, including some nations in Africa and the Middle East, maintain a large government-run part of the economy.

ACTIVITY 2 (CONTINUED)

Question 7: Taxes enable governments to obtain money from citizens to provide services. Can taxes influence economic growth?
Answer: Yes. High tax rates reduce income and influence investment decisions. If the government, for example, taxes income from investments at a high level, people will choose to make few investments. High-tax nations such as Iran, the Dominican Republic, and Cameroon tend to have low incomes. Low-tax places, such as Hong Kong and Singapore, tend to have high incomes.

Question 8: What about trade? Are nations that encourage trade likely to have higher incomes or lower incomes?
Answer: Open trade helps nations improve people's incomes in several ways. First, when a nation imports goods, it allows its citizens access to the best goods at the lowest prices. Second, being open to trade allows a nation's businesses to find new markets for their products. This encourages the growth of larger businesses that employ many workers for export markets. Finally, trade keeps levels of competition high in the economy. While competition is painful for many businesses and workers, it allows consumers to have access to the best goods and the lowest possible prices.

Question 9: What are some examples of nations with high and low trade restriction?
Nations with low trade restrictions are Hong Kong, Singapore, Ireland, and South Korea. Nations with high trade restrictions are Iran, Brazil, India, Peru, Bangladesh, Argentina, Pakistan, and Ghana.

Questions for Discussion

1. What is economic growth?
2. What are private property rights?
3. What is the relationship of private property rights to economic growth?
4. What do you think would happen to savings levels in a nation where the government took people's money out of savings accounts every few years in order to pay its debts?
5. How are saving and investment related?
6. What role is played by the securities markets?
7. What are investments in physical capital?
8. What are investments in human capital?

ACTIVITY 2 (CONTINUED)

9. How does the level of taxation influence economic growth? ______________________

10. How does openness to trade influence economic growth? ______________________

11. Name one good or service made in another nation that you thought was a good buy. ______________________

12. Name a good or service that United States firms export. ______________________

ACTIVITY 3
PICKING WINNERS AND LOSERS INVESTMENT COMMITTEE

Name ______________________ **Date** ______________________

Nation 1
This nation has made significant progress in recent years, moving away from a state-planned economy toward a market-based system. Eighty-eight percent of people 15 years and older can read and write. Laws now protect private businesses. The private sector has expanded. Farms have been returned to private ownership. The nation has opened itself to trade with other nations. It exports rice and crude oil. However, the government is unwilling to let go of many large state-run businesses. The unemployment rate is high.

What do you think is the risk of buying stocks in firms in this nation?

Circle One: High Medium Low

Why? ____

____

Nation 2
This former member of the Soviet block has transformed its economy. One hundred percent of people aged 9-49 are literate. The private sector is growing rapidly. In 1994, private business created 70,000 new jobs. State-owned businesses have declined and now account for only 12.5 percent of retail trade. International trade is expanding rapidly.

What do you think is the risk of buying stocks in firms in this nation?

Circle One: High Medium Low

Why? ____

____

ACTIVITY 3 (CONTINUED)

Nation 3
This nation's economy is a mixture of central planning, state ownership of oil and other large enterprises, village agriculture, and small-scale businesses. Fifty-four percent of people over 15 can read and write. Efforts to reduce the role of government in the economy have moved slowly. The government is in debt to creditors. Earnings from oil provide over one-half of its export income. Recently, the nation has experienced a moderate rate of economic growth. What do you think is the risk of buying stocks in firms in this nation?

Circle One: High Medium Low

Why? ______________________________

____

Nation 4
Over 90 percent of the large-scale industry is state-run. There has been a lack of law and order, caused by civil war. Twenty-four percent of the people aged 10-years old and above can read and write. Traditionally, the nation does not encourage international trade, although it does export coffee.

What do you think is the risk of buying stocks in firms in this nation?

Circle One: High Medium Low

Why? ______________________________

____

Nation 5
This nation is a fully-developed high-tech, industrial society. It has a vast private sector, skilled labor force, and modern factories. Ninety-seven percent of people over age 15 can read. The nation's businesses are highly involved in international trade. A recent constitutional crisis regarding the future of French-speaking areas, however, has made investors edgy.

What do you think is the risk of buying stocks in firms in this nation?

Circle One: High Medium Low

Why? ______________________________

____

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LESSON 20

HOW DO BUSINESSES OBTAIN FINANCING?

INTRODUCTION

Students will study funding options available to businesses and advise corporations about financing options.

ECONOMICS BACKGROUND

When corporations need to obtain financing, they can enter the capital markets to obtain loans from financial institutions or sell debt (bonds) or ownership (stocks). These markets, like other markets, allow buyers and sellers to find each other and reduce the cost of trade. Capital markets also enable businesses to get started and to expand, thus increasing economic growth by creating jobs and providing goods and services to consumers and other businesses.

LANGUAGE OF ECONOMICS

Capital Markets: Markets where sellers of securities, such as bonds and stocks, trade with buyers. This activity is essential to corporate financing and allows businesses to start and expand. Capital markets are vital for economic growth.

Common Stock: A share of ownership in a company. Owners of common stock receive a share of a company's profits—or bear a share of its losses up to the amount invested in the stock.

Corporate Bond: An IOU issued by a corporation in order to borrow money. Owners of these IOUs receive fixed interest payments from the borrowing corporation until the IOU is repaid at a given date in the future.

Dividends: The amount of profit a company pays to its stockholders.

Equity Financing: A source of corporate financing through the sale of corporate ownership, stocks, in the primary market.

Financial Markets: Markets that direct savings into money-type assets (such as stocks, bonds, and bank accounts) that pay households for the use of their savings. Commercial banks, savings and loans, credit unions, insurance companies, brokerage houses, pension funds, and investment bankers are some of the businesses that are found in financial markets.

Investment Banker: A business that gives a corporation advice on how to raise money and also sells new issues of stocks or bonds.

New-Issues Market: A market in which a corporation sells new stock to raise money for start-up or expansion. This market is often called the primary stock market.

Preferred Stock: Preferred stock (like common stock) represents ownership in a company. But preferred stockholders receive special treatment because company dividends are distributed to them before being paid to holders of common stock. Preferred stockholders usually are paid a fixed dividend. Should the company go bankrupt, preferred shareholders would receive payment prior to common stockholders.

Retained Earnings: The amount of profit a company keeps to buy new equipment, buildings, and other resources that the company uses to expand and modernize.

Venture Capitalist: Individual or organization that invests in new businesses in exchange for partial ownership of the company.

CROSS CURRICULUM SKILLS

Students develop skills in group participation, writing, and speaking.

OBJECTIVES

1. Students define *financial capital* and *capital markets.*

2. Students describe the sources of financial capital available to businesses.

3. Students explain the advantages and disadvantages of each source of financial capital.

4. Students analyze and select financing options for a particular firm's needs.

MATERIALS

- Visuals 1 and 2
- Activities 1, 2, and 3

TIME REQUIRED

Two class periods

PROCEDURE

A. Tell students that in this lesson they will examine ways in which businesses raise money to get started or expand. Ask them if they've ever thought of having their own business. Where would they get the money, and what would they need the money for? Encourage them to think about the costs of running a business.

B. ✍ Distribute Activity 1, *The Crown Jewels.* Explain that this information will introduce them to a variety of funding options. Read and discuss the case of Camisha Crown, how she built her business, and the methods she used to obtain the money she needed. What problems did she have? What did she have to consider? Ask the students to discuss the questions. (*You might want to wait until after the lesson is completed to discuss question 6.*)

Answers to Activity 1

1. Define *financial capital* and *capital markets.* Why are they important to Camisha and to the economy?
(*Financial capital—money to start or expand a business. Capital markets—markets where financial capital is traded. Financial capital and capital markets allowed Camisha to find investors so her business could expand. In her expansions, she has provided jobs and income to workers and products to consumers, which increases economic growth.*)

2. Why did Camisha need money for her business?
(*She needed money to get the business started, to obtain working capital, to permit expansion.*)

3. Why was there a difference in judgment by the bank? First the bank said no, then yes.
(*The first loan requested was long-term without collateral and with substantial risk. The second loan was a short-term loan with substantial collateral and much less risk.*)

4. List the sources of financial capital Camisha used as a sole proprietor and as a corporation.
(*Sole proprietor—own money, relative's money, short-term loan from bank.
Corporation—sale of stock, sale of corporate bonds, use of retained earnings.*)

5. List the reasons each source was selected.
(*Sole proprietor: Own money—only way to start. Also, she needed to convince others she was serious.
Relatives—only place she could get the start-up money.
Short-term loan from bank—needed working capital.
Corporation: Sell stock—needed large amount of money, would not have to be repaid.
Sell corporate bonds—did not want to lose any control over business, financial position strong enough to handle debt.
Use retained earnings—easier and faster. Did not involve debt or loss of control.*)

6. What decisions will The Crown Jewels make in the future? Write another "chapter" in the story.
(*Answers will vary.*)

C. Display Visual 1, *Sole Proprietorship and Partnerships: Where to Look When Looking for Money.* Briefly discuss each point. Remind students that Camisha Crown was a sole proprietor when she started, and she considered most of those options as she built her business. It is important that students understand that just because these are options, they are not always available to the budding entrepreneur or even the well-established business. Individuals and financial institutions are really fussy about to whom they lend money. Reinforce the following as you discuss the visual:

1. Owner's Money and Assets: Owners can

use their own money. Whether they choose to do so would tell you a lot about the commitment of that individual to the business. It is a risk because there are no guarantees that the business will be a success. The proprietor could also sell assets, like an interest in a house, gold coins, or stocks to obtain financial capital.

2. Friends and Relatives: The owner's initial investment may not be enough. The business person may need help from someone like a friend and a relative, if they are the only ones willing to invest. However, most individuals' friends and relatives do not have the money to fund a business.

3. Venture Capitalists: Individuals can look to venture capitalists for money, but the rate of rejection is high, and venture capitalists usually do not look into companies as small as Camisha's. Venture capitalists typically invest $500,000 or more.

4. Banks, Savings and Loans, Credit Unions: Banks are not eager to loan to small businesses. The failure rate is very high, and bankers have a responsibility to their depositors. If they do lend money, the loan would probably be a short-term loan. Some banks do participate in government-funded programs from the Small Business Administration. These are designed to help small businesses begin and expand.

D. Explain that there are more options open to corporations that need to raise money than there are to sole proprietorships and partnerships. Display Visual 2, *Corporations: Where to Look When Looking for Money*. Briefly explain each option. Tell students that the option a corporation chooses depends on a number of factors, such as the financial position of the company, level of debt, concerns over control, availability of net profit, and so on. Reinforce the following as you discuss the visual:

1. Retained Earnings: The preferred method of obtaining financing is simply to put some of the profit back into the business. This is the use of retained earnings—the money that is left, net profit, after the bills and dividends have been paid.

2. Debt: Corporations can borrow money from a bank or another financial institution or from the public. In each type of borrowing, corporations must pay back the amount loaned with interest.

3. Equity: Another way of raising money is to sell ownership in a company by selling stock, preferred or common. Selling preferred stock is similar to getting a loan, since preferred stockholders receive a fixed dividend amount and can't vote. Common stockholders receive dividends only if the board of directors chooses to distribute them, but common stockholders can vote.

E. Since each of these options has advantages and disadvantages, the firm must weigh its needs and objectives. Distribute Activity 2, *Corporations Have Many Options, But No Easy Choices*. Explain that before students can select which option is best in which situation, they need to understand the advantages and disadvantages of each. Read the outline together and discuss it. Refer to Camisha Crown. When did she choose equity capital? Debt capital? Also, mention that some corporations may choose to use a combination of options.

F. ✍ Distribute Activity 3, *Case Studies for the Investment Advisor*. Divide the class into groups. Instruct the students to play the role of a financial advisor. Assign one, some, or all of the case studies to each group. Ask the groups to discuss, then select the best option(s) for each case study. Each group should write a report to be presented to the board of directors explaining why a particular option was selected or rejected and then make a presentation to the class.

Suggested Answers to Activity 3:

Case A, Andrew's FreeWheelin Bicycle Company, Inc.: *Debt-Corporate Bonds*
Can't use retained earnings, because it doesn't have any. Can take on debt. Interest on debt is

tax deductible, so it would reduce tax liability. The company does not want to give up any additional control.

Case B, Paddy O'Reilly's Irish Pub, Inc.: *Sell equity (stocks)*
No profit recently, so can't use retained earnings. Already has debt load. If the company takes on more, it could hurt its public image as more debt would raise its liabilities. Since the family owns 70 percent of the stock, there is little loss of control if more stock is sold. The money from the sale of stock will not have to be paid back. Actually, it will make the annual report look even better.

Case C, Joe's Lawn Service, Inc.: *Short-term loan from a commercial bank*
Since the money is needed only for working capital, a 90-day loan from a commercial bank will do. It should be easy to get because of the strong financial position of the company, available collateral, and the short-term arrangement. Selling stocks and bonds would be more costly and complicated. In 90 days, the obligation is over. If the company sells stock, the company will have new owners.

Case D, Molly's Magnificent Fashions, Inc.: *Retained Earnings*
This company can use its net profit, retained earnings, to fund the expansion. It will be faster because it is internal. There is no need to incur debt or sell stock in this very profitable company.

G. Remind students that as they select stocks for *The Stock Market Game*, they should try to determine what decisions the corporation has made in terms of funding. What do the funding decisions tell them about the company? Do they think the company made the correct decision?

CLOSURE

Summarize the lesson. Explain that corporations have three major sources of financial capital: retained earnings—putting net profits back into the company; corporate bonds—taking a loan from the public; and selling stock—ownership in a company. Which source of financing a corporation chooses depends on its individual objectives and financial situation. The investment-banking system acts as an intermediary between the demand for and supply of money in the capital market. These capital markets, essential sources of corporate financing, allow businesses to begin and expand, which increases economic growth by creating jobs and income to workers and providing goods and services for consumers and other businesses.

ASSESSMENT

Multiple Choice Questions

1. Individual proprietorships and partnerships finance their start-up and expansion through all the following except
   a. personal savings and assets.
   *b. corporate bonds.
   c. venture capitalists.
   d. loans from commercial banks.

2. Advantages of corporate financing alternatives include all the following except
   a. retained earnings, which do not involve debt or loss of control.
   b. equity financing, which is not as risky as bonds.
   c. corporate bondholders can't vote or exercise control.
   *d. dividends to stockholders are tax deductible.

ESSAY

✍ When a company finances its own expansion by use of retained earnings, it incurs no debt and its owners don't have to worry about sharing control of the firm with any new owners. This sounds good. Why would any businesspeople want to use other means of financing their operations? State and explain your answer in an essay.

1. *Using retained earnings can be done faster and is less costly, incurs no debt, and does not increase control by others over the firm since there are no new stockholders. However, not all companies have retained earnings available, especially those companies that are experiencing growth and expansion.*

2. *When companies issue corporate bonds, they*

do not lose any control because bondholders can't vote and exercise control like stockholders, and interest on the debt is tax deductible, which reduces the corporation's tax liability. It does, however, increase the firm's debt and could cause cash-flow problems since interest must be paid whether there are profits or not.

3. *When companies sell equity, shares of stock, money received from sale does not have to be repaid because stockholders are owners too. It is not as risky as bonds, and the company looks stronger financially. The corporation does give up some control because stockholders can vote. Dividends are paid out of profit and are not tax deductible like interest.*

JOURNAL

✍ Read the financial section of your newspaper—or *Business Week, Forbes,* or *The Wall Street Journal*—for articles about corporate financing for business start-ups or expansions. For each start-up or business expansion, determine what method of financing was used and the reasons given. Record the information and note your comments on the advisability of each choice.

VISUAL 1
SOLE PROPRIETORSHIP AND PARTNERSHIPS: WHERE TO LOOK WHEN LOOKING FOR MONEY

OWNER'S OWN MONEY AND ASSETS

- Personal savings
- Mortgage the house

AUNT MINNIE OR PAL JOEY

- Wealthy relatives who believe in you
- Good friends—*really* good friends

VENTURE CAPITALISTS

- Individuals or organizations who will invest in a business in return for an interest in the ownership and profit

LOANS FROM COMMERCIAL BANKS, SAVINGS AND LOANS, CREDIT UNIONS

- Most small businesses fail, so a loan is hard to get.
- Banks require very low risks before they will lend.
- Most loans are short-term—businesses, especially those starting out, need long-term.

VISUAL 2

CORPORATIONS: WHERE TO LOOK WHEN LOOKING FOR MONEY

RETAINED EARNINGS—Net Profit After Dividends

- Corporation puts its own money back into the business to buy new equipment, buildings, and other resources to expand and modernize.

DEBT—Take a Loan—Borrow Money

- SHORT-TERM LOAN IN FINANCIAL MARKETS:
  A loan from a commercial bank, savings and loan, credit union, insurance company.

- LONG-TERM LOAN THROUGH CORPORATE BONDS:
  A loan from the public. Corporation borrows money and issues IOUs. Owners of IOUs receive fixed interest payments from the borrowing corporation until the principal and interest are repaid.

EQUITY—SELLING OWNERSHIP (SHARES OF STOCK) IN THE CORPORATION

- Preferred Stock
  - Fixed dividends distributed to preferred stockholders before holders of common stock.
  - Stockholders usually cannot vote.
- Common Stock
  - Dividends distributed by corporate decision.
  - Stockholders receive a share of company's profits or losses.
  - Stockholders can vote and exercise control.

ACTIVITY 1

THE CROWN JEWELS

Name ______________________________ **Date** ______________________________

Camisha Crown was manager of a jewelry store in upscale Newport for 15 years. She was very capable. The owner hoped Camisha would make his store her career. But Camisha had other plans. She had always dreamed of owning and managing her own jewelry store, of being an entrepreneur—a person who assumes risk by starting and running a business. She did a lot of research, talked to lawyers and accountants, shopped for locations, and learned as much as she could about running a business.

The new year was almost upon her. The time was right. Over the years, she had invested a portion of her income, so she had money to put into the business, but she needed more. Confidently, Camisha went to a local bank and asked for a long-term loan of $100,000 to begin her business. She told them that she had a location, a source for inventory, the product she would sell, and $100,000 of her own money to invest. The loan officer listened patiently and was quite impressed with her efforts, but said "sorry, no." He explained that banks rarely lend money for long-term loans—especially on small business start-ups. The figures show quite clearly that most new businesses fail, so this is too risky a loan for them. The bank would be willing to give her a short-term loan of 90 days, but both agreed that the business probably wouldn't be successful in that short a time, so repayment would be difficult. She needs time for consumers to become aware of her product. She needs a long-term loan. He suggests she might want to contact a venture capitalist—someone who lends start-up money for businesses in exchange for some ownership. She decides against this because she knows venture capitalists turn down most of the requests they receive; and they usually invest in amounts considerably in excess of $100,000. Moreover, she wants to remain in complete control of her business.

Determined to find financial capital—money to start or expand a business—Camisha turns to her friends and relatives and pleads her case. Her friends have not been as frugal and don't have the money to invest. Her relatives were hoping Camisha could lend them a couple of bucks until payday. Then she called her favorite aunt, Aunt Minnie. Aunt Minnie had fond memories of Camisha from when she was a little girl. Unlike her other nieces and nephews, Camisha always sent a prompt thank-you note for the birthday gifts Minnie had sent. As she grew up, Camisha remembered Minnie on special days. Aunt Minnie concluded that such consideration and attention to detail probably made Camisha not only a fine niece, but a good business manager as well. Aunt Minnie knew there was a risk involved, but she thought of it as a good investment and expected a return. "Yes," she said. "I will stake you in your new business." Camisha was thrilled and very grateful that her mother had insisted she write her thank-you notes right away.

Since both Camisha and Aunt Minnie were financially responsible, they had loan papers drawn up for each to sign. Aunt Minnie wrote a check for $100,000, and Camisha promised to pay both the principal and interest back over a period of time, which she did. Aunt Minnie was not interested in control over the business. She was delighted that Camisha was going into her own business. She did suggest the name for Camisha's store—The Crown Jewels.

In January, The Crown Jewels opened, and Camisha discovered that being a good owner/manager often means long hours and lots of work. Getting a business started and growing requires a big commitment. By October, The Crown Jewels had begun to do well. Camisha saw an opportunity, prepared a plan, and went back to the bank. This time, she requested a short-term loan of 90 days. She explained that since 40 percent of her sales occur during the Christmas season, she knows she will be able to pay off the loan. Her jewels can be used as collateral to secure the loan. The loan officer judged this to be a low-risk loan. It was not a request for start-up

ACTIVITY 1 (CONTINUED)

capital but for working capital, so he agreed, on behalf of the bank, to give her the loan.

Camisha continues to be successful. Five years later, she wants to open three more stores. Although Aunt Minnie is delighted and proud of her success, Aunt Minnie doesn't have the $1 million Camisha needs to expand her business. Camisha debates. What should I do? She has been an individual proprietor, but perhaps she should become a corporation and sell stock. The money received from the sale would not have to be repaid because those stockholders would now be owners. But it would mean that there were more owners, so she would not have total control. Not a bad tradeoff, she decides. She contacts an investment banker who helps her sell stock in The Crown Jewels. This initial public offering is sold in the primary market, then traded in the secondary markets. The capital markets, where financial capital is traded, had allowed her to find buyers and expand. Camisha did keep 60 percent of the stock.

Ten years later, there are ten The Crown Jewels stores in three states and more opportunities for expansion. Camisha does not want to sell any more stock because she doesn't want to give up control. She knows, from her continual research, that most corporations prefer to use their net profit, the money that is left after the bills are paid, to buy new equipment, buildings, inventory, or other resources they might need to expand or modernize. Her business has expanded so fast she has not been able to use net profit (called retained earnings) to fund her continued expansion. The board of directors and Camisha, who still owns 60 percent of the stock, decide to sell corporate bonds; they take a loan from the public. They agree to repay the amount loaned, with interest, in regular payments. Although debt is always risky, Camisha knows that the interest is tax deductible, which will help when tax time comes; and bondholders can't vote, so there is not a loss of control.

Today, Camisha looks back on her career as an entrepreneur and as an owner/manager of a well-established company. She realizes that in order to become as successful as she is, she had to obtain financing. The financing that she chose depended on her needs and objectives at a particular time in her company's growth and on the financing sources available to her. In her expansions, she has provided jobs for many workers, and she has fulfilled herself as a person. For the last several years, the company has not had to obtain financing through stock equity or debt. The earnings have been substantial, so The Crown Jewels, Inc., put the net profit back into the company. This was certainly easier and less costly. But, as she ponders her retirement and eventually divestment (selling her interest in the firm), she wonders what decisions others will make for The Crown Jewels, Inc.

Questions for Discussion

1. Define *financial capital* and *capital markets*. Why are they important to Camisha and to the economy? ______

2. Why did Camisha need money for her business? List the reasons. ______

3. Why was there a difference in judgment by the bank? First the bank said no, then yes. ______

ACTIVITY 1 (CONTINUED)

4. List the sources of financial capital Camisha used as a sole proprietor and as a corporation.

5. List the reasons each source was selected.

6. What decisions will The Crown Jewels make in the future? Write another "chapter" in the story.

ACTIVITY 2

CORPORATIONS HAVE MANY OPTIONS, BUT NO EASY CHOICES

Name ______________________________ **Date** ______________________________

When a corporation needs money, the choice it makes about how to get it can tell you a great deal about the company. It is not an easy choice, as the company must weigh the advantages and disadvantages of each option against its needs and financial situation. Each of the choices can have significant consequences in the future. As you read and discuss this introduction to the capital markets, think about the strengths and weaknesses of each alternative. Pay attention because when you are finished you will become an instant expert, a financial advisor, called in to give advice to an indecisive corporation. Here are the alternatives.

Retained Earnings: The amount of profit (net profit after dividends) a company keeps to buy new equipment, buildings, and other resources that the company uses to expand and modernize.

+ Using the corporation's net profit, putting it back into the company can be done quickly and without finance charges because this option is internal. It does not require going outside to ask for money.

+ No debt. This is not a loan.

+ Does not increase control by others over the firm, since no new stockholders are brought on board as owners.

– Not all companies have retained earnings available, especially companies that are experiencing growth and expansion. That is why many companies can't use this option.

Debt: Take a Loan

A. Short-term loan from financial institutions such as a commercial bank, savings and loan, credit union, insurance company. Banks are usually unwilling to lend long-term, and if they do, they will want *large* collateral.

B. Long-term loan through corporate bonds. The corporation borrows from the public and issues IOUs through corporate bonds. Owners of these IOUs received fixed interest payments from the borrowing corporation until the IOU is repaid at a given date in the future.

+ Because they aren't shareholders, bondholders can't vote and exercise control. The relationship ends when the debt is paid.

+ Interest on the debt is tax deductible. This reduces the burden of making the interest payments.

– Increases that firm's debt (liabilities). Could make the company look bad.

– The bond represents a fixed obligation. The money will have to be paid back—both interest payments and principal—at maturity. This obligation could cause a cash-flow problem. Since interest must be paid whether there are profits or not, taking on debt is always a risk.

Equity: Selling ownership, shares of stock in the corporation

Preferred stockholders receive special treatment because company dividends, usually fixed, are distributed to them before being paid to holders of common stock. The equity alternative involving preferred stock is similar to getting a loan, since preferred stockholders usually cannot vote.

Owners of common stock receive a share of a company's profits—or bear a share of its losses up to the amount invested in the stock. They vote for the board of directors who appoint the management of the company. The corporation decides if stockholders receive a dividend, but they can vote and exercise control.

+ No debt. Money received from sale of stock does not have to be repaid, since stockholders are owners, too. Not as risky as bonds. Company looks stronger financially.

ACTIVITY 2 (CONTINUED)

- + Firm does not *have to* pay dividends, so future net profit (retained earnings) can be put back into the company.
- – Give up some control, since stockholders can vote. They could limit or interfere with the major owner/manager of the firm and the firm's current direction.
- – Dividends are paid out of profit and are not tax deductible like interest.

Once the Choice is Made

When a corporation uses retained earnings, the decision is made internally and implemented by means of an accounting procedure. No outside approvals are required. For these reasons, use of retained earnings is a preferred way of obtaining financing. Loans from financial institutions require agreements between the corporation and the lending institution regarding the amount of money loaned, the interest to be paid, the length of the loan, and the amount of the payments.

Corporations that decide to sell ownership in their company (stocks) or sell debt (bonds) "go" to the capital markets. They usually turn to an investment banker who gives them advice on what securities to issue and what steps need to be taken to sell these securities. The investment banking system acts as an intermediary between the demand for and supply of money in the capital market. These markets allow buyers and sellers to find each other, and reduce the costs of trade. These stocks, initial offerings, and bonds are sold in the primary market, then traded in the secondary markets. Obviously, these capital markets, essential sources of corporate financing, allow businesses to start up and expand, and the effect of this is to foster economic growth by creating jobs and income for workers and by providing goods and services for consumers and other businesses.

ACTIVITY 3
CASE STUDIES FOR THE INVESTMENT ADVISOR

Name ______________________________ **Date** ______________________________

You're the Investment Advisor—What Do You Advise?
Using your knowledge about the possible sources of corporate financing, review the following cases and decide which type of funding you would recommend. Play the role of an investment advisor. Weigh the advantages and disadvantages of each alternative, considering the needs and objectives of the firm. Write a report that could be presented to the firm. Present your report orally to the class.

Case A: Andrew's FreeWheelin Bicycle Company, Inc.
Andrew's FreeWheelin Bicycle Company, Inc., would like to expand soon. The plan is to build another plant in a nearby city. FreeWheelin's financial position is excellent. While it is highly profitable, it does not have enough profit available for capital investment. It has little debt. Its tax liabilities are very high. The company does not want to give up any additional control.

Case B: Paddy O'Reilly's Irish Pub, Inc.
Paddy O'Reilly's Irish Pub, Inc., was originally a family-run business; it went public several years ago. At the time, the O'Reillys wanted to open operations in several cities. Now they have many locations throughout the Midwest. Those expansions were funded by corporate bonds. The family still owns 70 percent of the stock. Although the company has not shown a profit for the last two quarters, its financial condition is not critical; but more debt could strain the already-strained cash flow. The O'Reillys would prefer to maintain their image of a growing, prosperous firm. They need money for modernization of their kitchens to meet environmental protection laws and to become more efficient.

Case C: Joe's Lawn Service, Inc.
Joe's Lawn Service, Inc., is in a strong financial position. Summer is coming—a time when Joe's business makes most of its money. Joe would like to buy another truck and hire a few more workers. He just needs some money for a few months. The company will earn more than enough in the summer to pay it back.

Case D: Molly's Magnificent Fashions, Inc.
Molly's Magnificent Fashions, Inc., has shown significant growth and profit ever since Molly's designs became popular and in great demand. Molly anticipates continued profit. The company has a chance to expand by leasing space in a very desirable shopping center, but it must move quickly because others are in competition for the prime location.

LESSON 21
HOW TO READ AN ANNUAL REPORT

INTRODUCTION

Every publicly traded company is legally required to publish an annual report that analyzes the company's financial performance for the past year. In this lesson, students learn how to read and interpret the financial information in an annual report.

ECONOMICS BACKGROUND

Economic theory is based on the idea that incentives influence behavior in predictable ways. Profits direct businesses to produce what consumers demand. Profits affect how resources are allocated. Profits promote economic progress by encouraging production of the goods and services that are most wanted by the economy and by discouraging the production of goods and services that are not wanted as much.

Profits and losses direct business investment toward projects that improve economic progress and away from projects that waste resources. An annual report provides information that helps stock purchasers direct their savings toward profitable companies. The annual report helps stock buyers to choose corporations that produce efficiently, correctly anticipating the goods and services that consumers will demand. Wise choices are rewarded by greater returns. However, it is not only the owner of stock who is rewarded for correct choices. Profits drive the entire economy to become more allocatively and technically efficient.

LANGUAGE OF ECONOMICS

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Incentive: A benefit offered to encourage people to behave in a certain way.

Profit: The difference between revenues and the costs entailed in producing or selling a good or service; it is a return for risk-taking.

CROSS CURRICULUM SKILLS

Students develop skills in reading and writing. They interpret and analyze tables of data, apply percents and ratios to problem situations, and compute percents and ratios.

OBJECTIVES

1. Students read and analyze an annual report to determine a company's financial strengths and weaknesses.

2. Students define and discuss major accounting terms.

3. Students read, interpret, and analyze income statements and balance sheets.

4. Students use key ratios to analyze and evaluate financial data.

MATERIALS

- ◆ Visuals 1 and 2
- ◆ Activities 1, 2, 3, and 4

TIME REQUIRED

Two class periods

PROCEDURE

A. Explain to the class that the opportunity for financial gains from owning stock represents an important incentive. People who think the benefits of owning stock outweigh the costs face many choices. People who buy stock often use annual reports to analyze corporations whose stock they may wish to purchase. An annual report is an excellent source of financial information.

B. Distribute a copy of Activity 1, *How to Read an Annual Report*, to each student. Have the students read the first paragraph and Part A, "How Is an Annual Report Organized?"

C. Now review the sections of an annual report. A good technique for this is to pass out several annual reports to the students. You can obtain annual reports from local stockbrokers and corporations. Even if there is only a corporate branch in your area, it will probably have several copies of the corporation's annual report.

D. Now have the students read Activity 1, Part B, "The Income Statement." Answer any questions they may have.

E. Give each student a copy of Activity 2, *McDonald's Corporation Consolidated Statement of Income*. Have the students answer the questions for Part C, "McDonald's Corporation Consolidated Statement of Income" individually or in small groups.

F. Using Visual 1, *McDonald's Corporation Consolidated Statement of Income*, go over the answers:

Answers for Activity 1, Part C:

1. What were McDonald's total revenues in 1994?
   (*$8,320.8 million or $8,320,800,000 or about $8.32 billion.*)

2. What were McDonald's total operating costs and expenses in 1994?
   (*$6,079.6 million or about $6.08 billion.*)

3. What were McDonald's profits before taxes in 1994?
   (*$1,886.6 million or about $1.89 billion.*)

4. How much income tax did McDonald's pay in 1994?
   (*$662.2 million.*)

5. What was McDonald's 1994 net income or profits after taxes?
   (*$1,224.4 million or about $1.22 billion.*)

6. How much was McDonald's 1994 income per common share?
   (*$1.68*)

7. What was McDonald's dividend per common share in 1994?
   (*23 cents.*)

8. What can you say about McDonald's total net income during the past three years? Is this good or bad? Why?
   (*It has risen from $958.6 million to $1,224.4 million. This 28 percent increase is good.*)

9. What can you say about McDonald's net income per common share during the past three years? Is this good or bad? Why?
   (*It has increased from $1.30 to $1.68 or 29 percent. This is good because the profit per share is increasing. Increased profits often increase stock prices. This was certainly true of McDonald's, whose stock price increased during the time period.*)

10. McDonald's increased its dividends only a cent or so in each of the past three years, while its net income per common share increased much more. What did McDonald's do with the rest of its profits?
    (*McDonald's reinvested the difference into the company. If this reinvestment makes the company more profitable, the stock price should increase.*)

G. Have the students read Activity 1, Part D, "The Balance Sheet." Answer any questions they may have.

H. Have the students answer the questions for Part E, "McDonald's Corporation Consolidated Balance Sheet" individually or in small groups. Give each student a copy of Activity 3, *McDonald's Corporation Consolidated Balance Sheet*.

I. Using Visual 2, *McDonald's Corporation Consolidated Balance Sheet*, go over the answers:

Answers for Activity 1, Part E:

1. What is the largest current asset?
   (*Accounts receivable—$348.1 million.*)

2. How much is the property and equipment McDonald's owns worth after depreciation?
   (*$11,328.4 million or about $11.3 billion.*)

3. How much has McDonald's property and equipment depreciated since the company bought or built it?
   (*$3,856.2 million or about $3.86 billion.*)

4. What is McDonald's largest liability?
   (*Long-term debt—$2,934.5 million or about $2.93 billion.*)

5. How much long-term debt does McDonald's have?
(*$2,934.5 million or about $2.93 billion.*)

6. What is McDonald's total shareholders' equity?
(*$6,885.4 million or about $6.88 billion.*)

7. How much of its past profits has McDonald's retained or reinvested in the company?
(*$8,625.9 million or about $8.62 billion.*)

J. Distribute a copy of Activity 4, *Evaluating a Corporation's Performance*, to each student and have the students read it.

K. Explain the five key ratios. It is a good idea to give the students additional examples on how to calculate each ratio.

L. Have the students work in small groups to answer the questions about the ratios, using the Activity 2, *McDonald's Corporation Consolidated Statement of Income*, and Activity 3, *McDonald's Corporation Consolidated Balance Sheet.*

M. Go over the answers to Activity 4:

1. $$\frac{\text{Net income}}{\text{Total revenue}} = \frac{\$1{,}224.4 \text{ million}}{\$8{,}320.8 \text{ million}} = 14.7\%$$

2. $$\frac{\text{Net income}}{\text{Shareholders' equity}} = \frac{\$1{,}224.4 \text{ million}}{\$6{,}885.4 \text{ million}} = 17.8\%$$

3. $$\frac{\text{Long-term debt}}{\text{Shareholders' equity}} = \frac{\$2{,}935.4 \text{ million}}{\$6{,}885.4 \text{ million}} = 42.6\%$$

N. Ask: What do these ratios show about McDonald's as a company?
(*It really would depend on comparisons with other fast-food companies. However, McDonald's is above average in profitability and appears to have a reasonable level of long-term debt, which is less than 50 percent of shareholders' equity.*)

CLOSURE

Remind the class that people who buy stocks face many alternatives. They seek to find the alternatives that represent the best combination of costs and benefits. In what ways is an annual report useful to someone interested in buying stocks?
(*It is like a company report card: it shows how profitable and how wealthy a corporation is. It is necessary to compare the corporate report card to other report cards in order to conclude how well the company is doing.*)

ASSESSMENT

Multiple Choice Questions

1. The money a corporation receives from the sales of its products is known as
   *a. revenue.
   b. liabilities.
   c. depreciation.
   d. net earnings.

2. In order for firms to earn profits,
   *a. revenues must exceed costs.
   b. revenues must equal costs.
   c. net earnings must equal costs.
   d. net earnings must exceed assets.

3. A company's balance sheet lists
   a. profits and sales.
   *b. assets and liabilities.
   c. costs and earnings.
   d. exports and imports.

4. You analyze an annual report and find a company's Return on Equity Ratio is 21%. What does this tell you about the company?
   *a. It is above average in profitability.
   b. It is below average in profitability.
   c. It is average in profitability.
   d. It is certainly below average for the industry.

ESSAY

1. What does an income statement show? Explain.
(*An income statement is a profit-and-loss statement. It shows the corporation's revenues, costs, and profits. Its purpose is to show how profitable or unprofitable the company is.*)

2. What does a balance sheet show? Explain.
(*The purpose of a balance sheet is to show a stockholder's total investment in a company at*

a point in time. Assets minus liabilities equal shareholders' equity. Shareholders' equity indicates the net worth of the company.)

3. What does a high return on equity ratio mean about the company? Explain.
(*It shows how profitable the company is in relation to the amount of investment shareholders have in the company. Anything above 20 percent shows that the company is very profitable.*)

JOURNAL

✍ As you examine several examples of annual reports, jot down some notes about them in your journal. For example: what did you *expect* to find in a given annual report? Did the report actually include the things you expected to find? What did you learn from the annual report? Could you make use of that information in making an investment decision?

Look back at the annual reports you've examined and at the journal entries you've written about the annual reports. Based on your review, write a letter to somebody who does not know anything about annual reports. Tell this person what an annual report is and how you might use annual reports if you were an investor.

VISUAL 1
McDONALD'S CORPORATION CONSOLIDATED STATEMENT OF INCOME

(In millions of dollars, except per common share data)

Years ended December 31	**1994**	1993	1992
Revenues			
Sales by Company-operated restaurants	**$ 5,792.6**	$5,157.2	$5,102.5
Revenues from franchised restaurants	**2,528.2**	2,250.9	2,030.8
Total revenues	**8,320.8**	7,408.1	7,133.3
Operating costs and expenses			
Company-operated restaurants			
Food and packaging	**1,934.2**	1,735.1	1,688.8
Payroll and other employee benefits	**1,459.1**	1,291.2	1,281.4
Occupancy and other operating expenses	**1,251.7**	1,138.3	1,156.3
	4,645.0	4,164.6	4,126.5
Franchised restaurants—occupancy expenses	**435.5**	380.4	348.6
General, administrative and selling expenses	**1,083.0**	941.1	860.6
Other operating (income) expense—note	**(83.9)**	(62.0)	(64.0)
Total operating costs and expenses	**6,079.6**	5,424.1	5,271.7
Operating income	**2,241.2**	1,984.0	1,871.6
Interest expense—net of capitalized interest of $20.6, $20.0 and $19.5	**305.7**	316.1	373.6
Nonoperating income (expense)—net	**(48.9)**	7.8	(39.9)
Income before provision for income taxes	**1,886.6**	1,675.7	1,448.1
Provision for income taxes	**662.2**	593.2	489.5
Net income	**$ 1,224.4**	$ 1,082.6	$ 958.6
Net income per common share	**$ 1.68**	$ 1.45	$ 1.30
Dividends per common share	**$ .23**	$ .21	$ .20

The accompanying Financial Comments are an integral part of the consolidated financial statements.

From *Learning from the Market*, © National Council on Economic Education, New York, NY

VISUAL 2
McDONALD'S CORPORATION CONSOLIDATED BALANCE SHEET

(In millions of dollars)	December 31, **1994**	1993
Assets		
Current assets		
Cash and equivalents	**$ 179.9**	$ 185.8
Accounts receivable	**348.1**	287.0
Notes receivable	**31.2**	327.6
Inventories, at cost, not in excess of market	**50.5**	43.5
Prepaid expenses and other current assets	**131.0**	118.9
Total current assets	**740.7**	662.8
Other assets and deferred charges		
Notes receivable due after one year	**80.0**	90.0
Investments in and advances to affiliates	**579.3**	446.7
Miscellaneous	**380.4**	338.6
Total other assets and deferred charges	**1,039.7**	875.3
Property and equipment		
Property and equipment, at cost	**15,184.6**	13,459.0
Accumulated depreciation and amortization	**(3,856.2)**	(3,377.6)
Net property and equipment	**11,328.4**	10,081.4
Intangible assets—net	**483.1**	415.7
Total assets	**$13,591.9**	$ 12,035.2
Liabilities and shareholders' equity		
Current liabilities		
Notes payable	**$ 1,046.9**	$ 193.3
Accounts payable	**509.4**	395.7
Income taxes	**25.0**	56.0
Other taxes	**102.1**	90.2
Accrued interest	**107.7**	132.9
Other accrued liabilities	**291.9**	203.9
Current maturities of long-term debt	**368.3**	30.0
Total current liabilities	**2,451.3**	1,102.0

VISUAL 2 (CONTINUED)

(In millions of dollars)	December 31, **1994**	1993
Long-term debt	**2,935.4**	3,489.4
Other long-term liabilities and minority interests	**422.8**	334.4
Deferred income taxes	**840.8**	835.3
Common equity put options	**56.2**	
Shareholders' equity		
Preferred stock, no par value; authorized—165.0 million shares; issued—11.2 and 11.4 million	**674.2**	677.3
Common stock, no par value; authorized—1.25 billion shares; issued—830.3 million	**92.3**	92.3
Additional paid-in capital	**286.0**	256.7
Guarantee of ESOP Notes	**(234.4)**	(253.6)
Retained earnings	**8,625.9**	7,612.6
Foreign currency translation adjustment	**(114.9)**	(192.2)
	9,329.1	8,193.1
Common stock in treasury, at cost; 136.6 and 123.0 million shares (1,919.0)		**(2,443.7)**
Total shareholders' equity	**6,885.4**	6,274.1
Total liabilities and shareholders' equity	**$13,591.9**	$ 12,035.2

The accompanying Financial Comments are an integral part of the consolidated financial statements.

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ACTIVITY 1
HOW TO READ AN ANNUAL REPORT

Name ______________________ **Date** ______________________

People face strong incentives to purchase stocks. They are often interested in learning more about their alternatives. Every publicly traded company is legally required to publish an annual report that analyzes the company's financial performance for the year. The annual report also provides information about the company to current and prospective stockholders. People interested in buying stock use an annual report to analyze the profitability of a corporation. Because management uses the annual report to increase interest in the company and to show how well it is managing the company, potential stock buyers should read an annual report with a careful eye.

A. How Is an Annual Report Organized?

Although there are differences in annual reports, most conform to a general pattern. There are four basic sections.

Most annual reports open with a letter to shareholders from the chief executive officer (CEO). A typical letter provides an overview, highlights key things affecting the company, and provides a perspective on the company's future. The CEO is usually positive about the company's future. If the CEO is even mildly negative, it means the company has had a poor year. Few CEOs are negative about the future of the company because that attitude could get them fired.

In a second section called "investor review" or "review of operations," the report goes into detail about the company's products or services. This section usually has pictures of products and beautiful people, and it serves as a public relations tool for the company. A person interested in buying stock might get some ideas about innovative new products in this section.

A third section provides a review of the financial performance of the company for the past year. This section reviews and gives the company's interpretation of financial data such as sales, revenues, costs, taxes, profits, assets, and shareholders' equity.

The fourth section is the heart of the annual report. This section contains the income statement, balance sheet, and statements of changes in financial positions and shareholders' equity. There are no beautiful photos in this section, but it contains information important to people interested in buying stock. In addition to the income statement and balance sheet, there are detailed notes about accounting policies and particular items in the income statement and balance sheet. Skilled stock buyers sometimes find important information in these notes.

B. The Income Statement

The income statement contains information about the sales, costs, and earnings of the corporation. Earnings and income are the same thing as profits. The purpose of the income statement is to determine how profitable the company is. Sales minus costs determine the operating income or profit before taxes. Net income is profit after taxes. A very important figure is net income per common share, often called earnings per

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ACTIVITY 1 (CONTINUED)

share (or EPS). This is net income divided by the number of shares of stock issued. This figure shows how much net income (or profit) is behind each share of stock.

The corporation can do two things with its net income. It can distribute it to the shareholders in the form of dividends or reinvest it into the company. Income statements usually show the figures for three years. This allows shareholders to measure corporate performance over the three-year period. Investors want to see growing income each year, and they particularly want to see rising net income per share.

C. McDonald's Corporation Consolidated Statement of Income

To test your understanding of income statements, answer the questions below about McDonald's 1994 income statement, which is Activity 2. All the figures on the income statement except per share data are in millions of dollars.

1. What were McDonald's total revenues in 1994? __________
2. What were McDonald's total operating costs and expenses in 1994? __________
3. What were McDonald's profits before taxes in 1994? __________
4. How much income tax did McDonald's pay in 1994? __________
5. What was McDonald's 1994 net income or profits after taxes? __________
6. How much was McDonald's 1994 income per common share? __________
7. What was McDonald's dividend per common share in 1994? __________
8. What can you say about McDonald's total net income during the past three years?
   ____
   ____
   Is this good or bad? ______ Why? ______________________________
   ____
9. What can you say about McDonald's net income per common share during the past three years? ______________________________
   ____
   ____
   Is this good or bad? ______ Why? ______________________________
   ____
10. McDonald's increased its dividends only a cent or so in each of the past three years, while its net income per common share increased much more. What did McDonald's do with the rest of its profits?
    ____
    ____

ACTIVITY 1 (CONTINUED)

D. The Balance Sheet

You have just learned that an income statement shows a company's revenues, costs, and profits or losses over a certain period of time, which is a year in an annual report. The balance sheet, on the other hand, shows what a company is worth at a particular point in time. You might think of a balance sheet as a photo of the company's financial condition on the last day of the financial year. A balance sheet has three sections: assets, liabilities, and shareholders' equity.

The asset section lists categories of items owned by the company. This section is further divided into current assets and longer-term assets. Current assets can be converted into cash in a short period of time. Besides cash itself, current assets include accounts receivable, notes receivable, and inventories. Accounts receivable are unpaid bills the company has sent to its customers. Inventories are materials used to make the products the company sells, or more commonly the actual products it sells to customers.

A balance sheet also shows liabilities or debt. This is what the company owes to others on the date of the balance sheet. Current liabilities are those due within one year. An important liability is accounts payable. These are bills the company has received but has not yet paid. The company has more than a year to pay off its long-term debt.

The difference between what the company owns and what it owes is called shareholders' equity. Shareholders' equity is the amount of money shareholders have invested in the company. That investment is composed of two parts. The first part is the value of the stock the company sold to original investors. The second part of shareholders' equity is the money that has been reinvested from net earnings over the years. This is called retained earnings.

E. McDonald's Corporation Consolidated Balance Sheet

To test your understanding of balance sheets, answer these questions about the McDonald's balance sheet at the end of the reading. Note that all figures are in millions of dollars. All questions refer to 1994.

1. What is the largest current asset? ____________
2. How much is the property and equipment McDonald's owns worth after depreciation? ____________
3. How much has McDonald's property and equipment depreciated since the company bought or built it? ____________
4. What is McDonald's largest liability? ____________
5. How much long-term debt does McDonald's have? ____________
6. What is McDonald's total shareholders' equity? ____________
7. How much of its past profits has McDonald's retained or reinvested in the company? ____________

ACTIVITY 2
McDONALD'S CORPORATION CONSOLIDATED STATEMENT OF INCOME

Name ______________________ **Date** ______________________

McDonald's Corporation
Consolidated Statement of Income Financial Review

(In millions of dollars, except per common share data)

Years ended December 31	**1994**	1993	1992
Revenues			
Sales by Company-operated restaurants	**$ 5,792.6**	$5,157.2	$5,102.5
Revenues from franchised restaurants	**2,528.2**	2,250.9	2,030.8
Total revenues	**8,320.8**	7,408.1	7,133.3
Operating costs and expenses			
Company-operated restaurants			
Food and packaging	**1,934.2**	1,735.1	1,688.8
Payroll and other employee benefits	**1,459.1**	1,291.2	1,281.4
Occupancy and other operating expenses	**1,251.7**	1,138.3	1,156.3
	4,645.0	4,164.6	4,126.5
Franchised restaurants—occupancy expenses	**435.5**	380.4	348.6
General, administrative and selling expenses	**1,083.0**	941.1	860.6
Other operating (income) expense—note	**(83.9)**	(62.0)	(64.0)
Total operating costs and expenses	**6,079.6**	5,424.1	5,271.7
Operating income	**2,241.2**	1,984.0	1,871.6
Interest expense—net of capitalized interest of $20.6, $20.0 and $19.5	**305.7**	316.1	373.6
Nonoperating income (expense)—net	**(48.9)**	7.8	(39.9)
Income before provision for income taxes	**1,886.6**	1,675.7	1,448.1
Provision for income taxes	**662.2**	593.2	489.5
Net income	**$ 1,224.4**	$1,082.6	$ 958.6
Net income per common share	**$ 1.68**	$ 1.45	$ 1.30
Dividends per common share	**$ .23**	$ .21	$ .20

The accompanying Financial Comments are an integral part of the consolidated financial statements.

From *Learning from the Market*,

ACTIVITY 3

McDONALD'S CORPORATION CONSOLIDATED BALANCE SHEET

Name ______________________ **Date** ______________________

McDonald's Corporation
Consolidated Balance Sheet

Financial Review

(In millions of dollars)	December 31, **1994**	1993
Assets		
Current assets		
Cash and equivalents	**$ 179.9**	$ 185.8
Accounts receivable	**348.1**	287.0
Notes receivable	**31.2**	327.6
Inventories, at cost, not in excess of market	**50.5**	43.5
Prepaid expenses and other current assets	**131.0**	118.9
Total current assets	**740.7**	662.8
Other assets and deferred charges		
Notes receivable due after one year	**80.0**	90.0
Investments in and advances to affiliates	**579.3**	446.7
Miscellaneous	**380.4**	338.6
Total other assets and deferred charges	**1,039.7**	875.3
Property and equipment		
Property and equipment, at cost	**15,184.6**	13,459.0
Accumulated depreciation and amortization	**(3,856.2)**	(3,377.6)
Net property and equipment	**11,328.4**	10,081.4
Intangible assets—net	**483.1**	415.7
Total assets	**$13,591.9**	$ 12,035.2
Liabilities and shareholders' equity		
Current liabilities		
Notes payable	**$ 1,046.9**	$ 193.3
Accounts payable	**509.4**	395.7
Income taxes	**25.0**	56.0
Other taxes	**102.1**	90.2
Accrued interest	**107.7**	132.9
Other accrued liabilities	**291.9**	203.9
Current maturities of long-term debt	**368.3**	30.0
Total current liabilities	**2,451.3**	1,102.0

ACTIVITY 3 (CONTINUED)

(In millions of dollars)	December 31, **1994**	1993
Long-term debt	**2,935.4**	3,489.4
Other long-term liabilities and minority interests	**422.8**	334.4
Deferred income taxes	**840.8**	835.3
Common equity put options	**56.2**	
Shareholders' equity		
Preferred stock, no par value; authorized—165.0 million shares; issued—11.2 and 11.4 million	**674.2**	677.3
Common stock, no par value; authorized—1.25 billion shares; issued—830.3 million	**92.3**	92.3
Additional paid-in capital	**286.0**	256.7
Guarantee of ESOP Notes	**(234.4)**	(253.6)
Retained earnings	**8,625.9**	7,612.6
Foreign currency translation adjustment	**(114.9)**	(192.2)
	9,329.1	8,193.1
Common stock in treasury, at cost; 136.6 and 123.0 million shares (1,919.0)		**(2,443.7)**
Total shareholders' equity	**6,885.4**	6,274.1
Total liabilities and shareholders' equity	**$13,591.9**	$ 12,035.2

The accompanying Financial Comments are an integral part of the consolidated financial statements.

ACTIVITY 4
EVALUATING A CORPORATION'S PERFORMANCE

Name ______________________ **Date** ______________________

When investors look at financial information in annual reports, they use several key ratios to measure performance. These ratios usually are used to compare the company to others in the industry. For example, McDonald's is in the fast-food industry, so the ratios for McDonald's should be compared to the ratios of other fast-food companies. Comparing McDonald's ratios to those of an auto manufacturer or a chain of retail stores will not be useful. You probably will not have to calculate these ratios; they are available in many financial publications.

1. ***Net Profit Margin***

$$\frac{\text{Net income}}{\text{Total revenue}}$$

This ratio shows the percentage of total revenue that is left after all costs and taxes have been paid. The average corporation receives five cents for every dollar it has in sales. For example, if the net income is $100 million and the total revenue is $900 million, this ratio is calculated as follows:

$$\frac{\$100 \text{ million}}{\$900 \text{ million}} = \frac{1}{9} = 11.1\%$$

2. ***Return on Equity***

$$\frac{\text{Net income}}{\text{Shareholders' equity}}$$

This ratio shows the percentage return that shareholders received on their investment. Shareholders' equity is what is invested in the company. How does this company do compared to other companies? The national average is about 16 percent. A ratio above 20 percent is considered very good. Some analysts call it the "20 percent Club." For example, if net income is $100 million and shareholders' equity is $500 million, the net income to shareholders' equity ratio is calculated as follows:

$$\frac{\$100 \text{ million}}{\$500 \text{ million}} = \frac{1}{5} = 20\%$$

3. ***Long-Term Debt as a Percent of Shareholders' Equity***

$$\frac{\text{Long-term debt}}{\text{Shareholders' equity}}$$

This ratio shows how much debt the corporation has compared to its total capital. If this ratio is more than 1 to 1, the company may be too far in debt. A ratio of .25 or 25 percent is considered safe. For example, if the company has $200 million in debt and shareholders' equity is $700 million, the debt-to-equity ratio is as follows:

$$\frac{\$200 \text{ million}}{\$700 \text{ million}} = \frac{2}{7} = 29\%$$

4. ***Yield***

$$\frac{\text{Dividend}}{\text{Closing price}} \times 100$$

The amount of dividends received per share of stock divided by the stock's price is the percentage yield. The yield is always stated as a percentage. For example, if the dividend is $1 and the stock's closing price is $10, then the stock's yield is calculated as follows:

$$\frac{\$1}{\$10} = .10 \times 100 = 10\%$$

5. ***Price-Earnings Ratio (or P/E Ratio)***

$$\frac{\text{Closing price}}{\text{Earnings per share}}$$

The price-earnings ratio is the price of a stock as a multiple of its earnings per share. The P-E ratio is calculated by dividing the

ACTIVITY 4 (CONTINUED)

stock's last (closing) price by earnings per share. For example, if the stock's closing price is $12 and last year's earnings per share are $1, the P-E ratio is calculated as follows:

$$\frac{\$12}{\$1} = 12$$

Calculate the ratios for "McDonald's Statement of Income" (from Activity 2) and "Balance Sheet," (from Activity 3). Use 1994 figures.

1. Net Profit Margin

$$\frac{\text{Net income}}{\text{Total revenue}} = \underline{\hspace{3cm}} = \underline{\hspace{3cm}}\%$$

2. Return on Equity

$$\frac{\text{Net income}}{\text{Shareholders' equity}} = \underline{\hspace{3cm}} = \underline{\hspace{3cm}}\%$$

3. Long-term debt as a Percent of Shareholders' Equity

$$\frac{\text{Long-term debt}}{\text{Shareholders' equity}} = \underline{\hspace{3cm}} = \underline{\hspace{3cm}}\%$$

4. Yield: Find this in the most recent newspaper's stock pages. ______________________________.

5. Price-Earnings Ratio (P/E Ratio): Find this in the most recent newspaper's stock pages. ________

LESSON 22

RESEARCHING A BUSINESS

INTRODUCTION

In this lesson, students apply the concepts they learned in Lesson 21; they must have completed Lesson 21 before starting Lesson 22. To complete this lesson, students write to a corporation to receive the annual report and other information about the company. This should take two to three weeks. They then use this and other information to analyze the past performance and future prospects of the company. Finally, they make a buy, sell, or hold recommendation and earn their junior stock analyst merit badge.

ECONOMICS BACKGROUND

When students study the stock market, they are really studying business. Businesses that grow and expand are good investments. Poorly managed businesses are bad investments. In this lesson, students analyze the factors that determine which firms will grow and become more profitable and which firms will stagnate and fail. The lesson also illustrates how competition affects businesses.

LANGUAGE OF ECONOMICS

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Incentive: A benefit offered to encourage people to behave in a certain way.

Profit: The difference between revenues and the costs entailed in producing or selling a good or service; it is a return for risk-taking.

CROSS CURRICULUM SKILLS

Students develop skills in reading and writing. They interpret and analyze tables of data, construct and analyze graphs, and compute and analyze ratios to solve problems.

OBJECTIVES

1. Students analyze information in an annual report and other publications.

2. Students use criteria to evaluate corporate performance.

3. Students collect and analyze corporate data.

4. Students write a report evaluating corporate performance and make recommendations for investors.

MATERIALS

- ◆ Visuals 1 and 2
- ◆ Activity 1

TIME REQUIRED

One class period to discuss assignment. Additional time throughout the 6-week project to help students complete their reports. Almost all companies will send students their annual reports, but allow two to three weeks for the students to receive them.

PROCEDURE

A. Explain that when people purchase stocks, they are striving to make the best possible choice. They weigh the costs and benefits involved. Business success is an important consideration. Tell the students that they are going to undertake a project that will help them understand what makes a business successful or unsuccessful. In this project, they will:

   1. Write to a corporation's CEO to obtain an annual report.

   2. Track the corporation's stock price for five weeks.

   3. Analyze the annual report.

   4. Use the annual report to make recommendations to potential investors about the company's stock.

B. Distribute a copy of Activity 1, *Fundamental Analysis of a Corporation*, to each student. Have the students read this assignment sheet. Answer questions about the assignment. Tell the students they will choose their companies tomorrow.

C. Emphasize that the students should, if at all possible, choose a company they know something about. Display Visual 1, *Buy What You Know*, the Peter Lynch quotation, to emphasize this.

D. Display Visual 2, *Sample Business Letter*, as an example of how to write a business letter. Tell the students that you will check their letters before they send them. You might offer them extra credit if they turn in a perfect letter. Writing to a corporate CEO will personalize the business for students. Businesses are people.

E. Tomorrow is here. Have the students select the corporations they will research. The company must be listed on a stock exchange used in *The Stock Market Game*; these exchanges are the New York Stock Exchange, the American Stock Exchange, and the Nasdaq Stock Market. It is a good idea to have each student select a different company.

F. Over the next few days, have the students write their letters and check them.

G. After about a week, have the students begin tracking the stock price of their corporations.

H. About six weeks after the students begin tracking their stock prices, collect the project. Be sure to stress that Part VI of Activity 1 is very important. A good answer to Part VI requires at least a 2-page, well-organized essay. In making their recommendations, students should not hedge; they should give a specific recommendation and support it.

CLOSURE

After the reports have been turned in:

1. Have each student present his or her recommendation to a group of three or four students. Then have each group select the stock to buy.
2. Have each group report to the class on its recommendation. Group members should explain why they made their recommendation.
3. Have the class vote on the best stock to buy.
4. Follow that stock for the rest of the course. Then discuss why the stock was a good or a poor choice.

ASSESSMENT

Grade each project; the project is the outcome to be assessed.

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VISUAL 1

BUY WHAT YOU KNOW

During a lifetime of buying cars or cameras, you develop a sense of what's good, what's bad, what sells, and what doesn't. If it's not cars you know about, you know something about something else, and the most important part is, you know it before Wall Street knows it.

Peter Lynch
Former portfolio manager
Fidelity Magellan Fund

VISUAL 2
SAMPLE BUSINESS LETTER

1111 Bob-o-Link Road
Cheeseville, WI 53201
July 1, 1996

Mr. Adam Smith, President
Invisible Hand Corporation
1000 Braemar Road
Edinburgh, SD 57069

Dear Mr. Smith:

My class is studying business and the stock market, and I have chosen your company to analyze. Could you please send me the Invisible Hand Corporation's annual report and any other information that would be useful for my analysis?

Thank you for your help.

Sincerely,

David Ricardo

David Ricardo

ACTIVITY 1
FUNDAMENTAL ANALYSIS OF A CORPORATION

Name ______________________ **Date** ______________________

When you buy stock, you are becoming a part owner of a corporation. But which stocks should you buy? What are the costs and benefits? It is very difficult to predict the direction any particular stock will take. One of America's most successful investors is Warren Buffett, who says, "As far as I'm concerned, the stock market doesn't exist. It is there only as a reference to see if anybody is offering to do anything foolish."

You may already be familiar with some successful companies. According to Peter Lynch, former portfolio manager of the Fidelity Magellan Fund, "During a lifetime of buying cars or cameras, you develop a sense of what's good, what's bad, what sells, and what doesn't. If it's not cars you know about, you know something about something else, and the most important part is, you know it before Wall Street knows it."

In this project, you will carry out an investigation to learn all you can about a corporation. You should select a company that you think will be successful. Then you will investigate the company to find out if it really is a winner. In this project, you will crunch some numbers. You will use the annual report, information from stockbrokers, and other resources to find these numbers. You will use key ratios to analyze the stock. You will become an expert on one company.

Part I. Selecting a Company and Obtaining Information

Choose a company that is listed on the New York Stock Exchange, the American Stock Exchange, or the Nasdaq Stock Market. Write to the chief executive officer (CEO) to request a copy of the annual report. Names of CEOs and other corporate information are contained in the *Standard and Poor's Register of Corporations*. Writing to someone in the corporation will emphasize the point that corporations are run by people. It is the quality of management that you are buying when you purchase the corporation's stock.

Feel free to write the body of the letter in your own style. However, you must use a standard business-letter format. A letter with typographical or grammatical errors will not impress the person to whom you are writing.

After you write, call a stockbroker to obtain more information. Also, look for more information in your school or public library.

Part II. Graphing a Company's Stock Price

Graph the company's daily high, low, and closing stock price for at least five weeks.

Part III. Learning About Products, Markets, and Customers

Answer these questions.

1. What are the company's products and markets?
2. Who are its customers?
3. Do you think there will be growth in the demand for the company's products? Why or why not?

Part IV. Analyzing an Income Statement and Balance Sheet

Show that you can read the income statement and balance sheet by answering the following questions. Give actual figures when possible.

1. What is the purpose of the income statement?
2. What is the purpose of the balance sheet?
3. What is the largest current asset?
4. What is the largest asset?
5. What is the largest current liability?
6. What is the largest liability?
7. What is the net worth (shareholders' equity)?
8. How much are the company's net sales?
9. What is the company's largest cost?
10. What is the profit before income taxes?

ACTIVITY 1 (CONTINUED)

11. What is the profit after income taxes (net profit)?
12. What percentage of the firm's profit is paid in income taxes?
13. What are the earnings per share?
14. How much of the profit was paid in dividends?
15. How much of this year's profit was retained in the company?
16. How much profit has been retained in the company since it was started?

Part V. Analyzing Key Ratios

Use key ratios to analyze the company. Show how you calculated each ratio.

1. What is the profit margin? What conclusions can you draw from this?
2. What is the return on equity? What conclusions can you draw from this?
3. What is the long-term debt as a percent of shareholders' equity? What conclusions can you draw from this?
4. What is the yield? Use the most recent figure from the newspaper. Is this an appropriate stock to buy for income?
5. What are the earnings per share? Is the trend up or down over the last three years? What conclusions can you make from this trend?
6. What is the price-earnings ratio? Use the most recent figure from the newspaper. Do you consider the P-E ratio good or bad? Explain.

Part VI. Evaluating a Stock

What are the costs and benefits of purchasing stock in this company? Would you buy, sell, or hold the stock? Would you recommend the company's stock for income, or growth, or for both? Explain your answers in detail. Be sure to consider the strength of the industry and the strength of the company. What does the future look like for the industry and company? You should use the ratios you have calculated to analyze the company. Recommendations from *Standard and Poor's*, *Moody's*, and *Value Line* would be useful. In this section, you may want to use more recent figures than those in the annual report. Finally, be sure to include your own observations of the company's products and service.

LESSON 23
BUSINESS CYCLES AND THE STOCK MARKET

INTRODUCTION

This lesson demonstrates how the Dow Jones Average may change as stock buyers anticipate changes in the economy and the fortunes of particular companies. Past performance of a company is important to potential buyers when they chose stocks, but future performance is what they must try to predict.

ECONOMICS BACKGROUND

The business cycle is a series of periods of growing and shrinking economic activity and is an important characteristic of market economies. The business cycle consists of roughly four phases: expansion, peak, contraction, and trough. The business cycle influences the performance of many firms. It is measured by changes in real GDP over months and years.

LANGUAGE OF ECONOMICS

Business Cycle: The fluctuation in the general level of economic activity as measured by such variables as the rate of unemployment and changes in real GDP.

Real Gross Domestic Product (GDP): The total market value, adjusted for inflation, of all final goods and services produced in this country during a specific period.

Recession: A decline in the Real Gross Domestic Product (GDP) for a period of at least six months. During a recession, businesses produce fewer goods and services.

Unemployment Rate: The percentage of people in the civilian labor force who have no jobs but are actively looking for work.

CROSS CURRICULUM SKILLS

Students develop skills in reading and listening. They interpret and analyze graphs; they analyze percents in problem situations.

OBJECTIVES

1. Students define Real Gross Domestic Product.

2. Students explain the business cycle.

3. Students use information about the business cycle to decide on the merits of buying stock in different companies.

MATERIALS

◆ Visuals 1, 2, 3, 4, and 5
◆ Activity 1

TIME REQUIRED

One class period

PROCEDURE

A. Explain to students that this lesson will help explain why the Dow Jones Average often moves in the opposite direction of other news about the economy.

B. Display Visual 1, *The Stock Market Hates Good Economic News*. Ask: what is the main point of this statement?
(*The market should move up instead of down when good news is received about the performance of the economy.*)

C. Tell the students that they must use some economic knowledge to explain this apparent contradiction. Special knowledge often helps us to make sense of situations that seem odd or counter to our intuitions.

D. ✎ Display Visual 2, *Real GDP: What Does It Mean?*. Explain that real GDP measures production in the country during a year, but this production level changes constantly, either growing or declining.

E. ✎ Display Visual 3, *Instability in Growth of Real GDP*. Ask the following questions.

1. Has there been steady growth in real GDP since 1930?
(*No. It has often fluctuated.*)

2. What has been the long-term average growth in real GDP since 1930? (*3%.*)

3. When was the last time real GDP fell? (*1991.*)

F. Display Visual 4, *Business Cycle Diagram*, and give students the following mini-lecture.

> Historically, the United States has experienced swings in its rate of economic activity. Economists refer to these swings as the business cycle. Visual 4 illustrates a hypothetical business cycle. When most businesses are operating near capacity and real GDP is growing rapidly, a business peak is present. As business activity slows down, the economy falls into a recession or contraction phase. During this phase, sales of most businesses fall, real GDP grows at a slow rate or declines, and unemployment increases. The bottom of the contraction phase is called the recessionary trough. Beyond this point economic conditions may begin to improve. Then the economy enters the expansionary phase. Now business sales improve, real GDP grows rapidly, and the rate of unemployment declines. This expansion then blossoms into another peak.
>
> There is one misleading connotation of the term, "business cycle." "Cycle" implies that there is regularity in the swings involved, that the timing and duration of each cycle are the same. As you can see in Visual 3, actual business cycles do exist, but they are irregular. They differ in duration (how long they last) and magnitude (how low and high they move). What does this information have to do with buying stocks? Business leaders anticipate changes in the economy. What appears to be good economic news—such as a rise in real GDP—is interpreted in the context of what might happen next: the economy is at a peak and may be about to enter a recession. Ask yourself the following question: Would you like to buy shares at the peak of the business cycle or at the recessionary trough? (*Answer: buy shares low in the trough and sell shares high at the peak. Therefore, information that suggests the economy is at a peak and not likely to grow further will encourage selling; information suggesting the economy is at its lowest will encourage buying if people think the economy will get better.*)

G. Distribute a copy of Activity 1, *Would You Buy This Stock Now?* to each student. Ask the students to read the handout carefully and use the information about business cycles to decide which stocks are the best buys at this time.
(*Stock 1 probably is not a good buy. Its price is at its historical peak; the economy will not grow more to expand business sales. Business is not likely to get better in the future, so investors will not pay a higher price for the stock.*

Stock 2 seems to be a good buy. The company has a lot of room to grow; so does the economy. The firm has experienced the worst economic situation at this time and still is able to break even. Its profits should grow very quickly as the economy improves. It has little competition to contend with, and its customers are increasing their production.

Stock 3 seems like a good buy, but its performance is not related to the business cycle. It will have a monopoly on a drug that will be demanded by every cold sufferer in the world. It has great potential for sales for eight years until the patent rights run out.)

CLOSURE

Display Visual 5, *Main Points of the Lesson*, and use it to help the students review the main points of the lesson:

1. The economy, as measured by real GDP, fluctuates in its growth pattern.
2. This fluctuating growth pattern is called the business cycle.
3. The business cycle consists of four phases: business peak, contraction, recessionary trough, expansion.
4. Stock purchasers would like to buy a stock when its price is low and when the opportunity for increased business profits is good.
5. Stockholders would like to sell a stock when its price is high and the opportunity for increased business profits is poor.

6. This knowledge of business cycles and interest in future performance will occasionally cause share holders to sell on good economic news and buy on bad economic news.

7. Stock buyers try to anticipate where the economy is going next. The decisions they make, based on their anticipation of developments in the business cycle, will occasionally cause the Dow Jones Average to fall on good economic news and rise on bad economic news.

ASSESSMENT

Multiple Choice Questions

1. The point in a business cycle where GDP reaches its lowest point and unemployment its highest is the
   - a. expansion.
   - b. peak.
   - c. contraction.
   - *d. trough.

2. What is the best explanation for a shareholder's decision to sell the stock of a company that reported record sales and profits for the fourth year in a row?
   - a. The shareholder is impatient and can't wait to get a better return next year.
   - b. The shareholder is irrational and should be considered loony.
   - *c. The shareholder doesn't think the company can continue to improve its performance in the future.
   - d. The shareholder did not learn about the business cycle.

ESSAY

✍ Your father has been listening to a mutual funds salesperson make the following argument to invest in a mutual fund. (A mutual fund is an investment company that pools the money of its shareholders in order to buy stocks of many other companies.)

> "Now is the time to invest. The economy is growing at 4 percent. It has been growing that way for four years, and stock prices have all been moving up. It's time to get in now and join the crowd before the stock prices get even higher."

Use your knowledge of the business cycle to advise your father on this investment opportunity. (*This time may not be the best time to buy stocks. The economy may be near the business peak. If it is, shareholders are likely to begin selling in greater numbers, driving stock prices down. It would be wise to look into the mutual fund's holdings and see what companies the fund owns. If it owns companies whose production is at an all-time high, so profits and sales cannot expand much further, this is an opportunity to pass up.*)

JOURNAL

✍ Watch for newspaper reports on the performance of the economy and record notes on the reports in your journal each month. Specifically look for reports on Real GDP, Consumer Price Index (inflation), and changes in the unemployment rate.

VISUAL 1

THE STOCK MARKET HATES GOOD ECONOMIC NEWS

The Stock Market makes no sense. Positive news often results in the Dow Jones Average falling, while negative news often will send the Dow Jones Average higher.

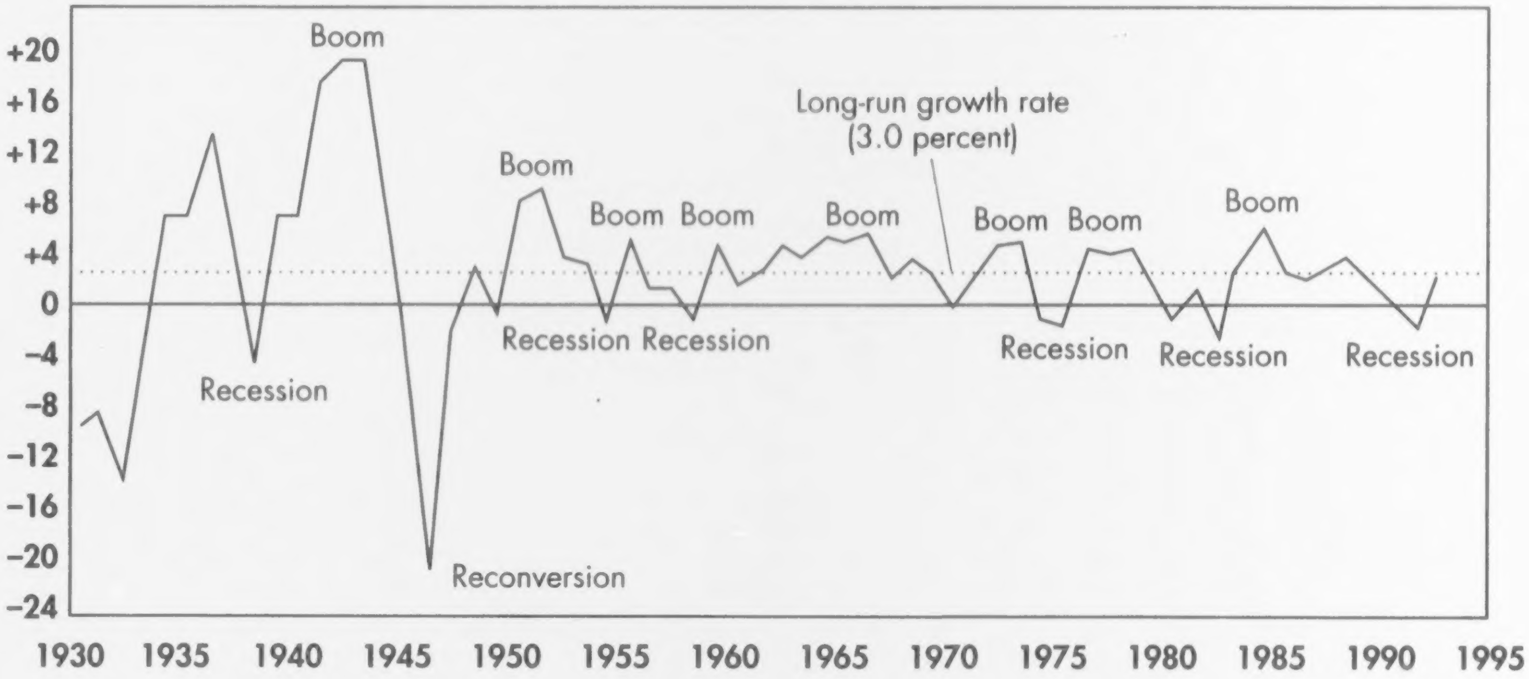
Yesterday, the Dow plunged 18% when the Commerce Department reported strong economic growth. Real GDP grew at an annual rate of 3.5% last quarter.

It wasn't the first nor the last time this contradiction occurred. A growing economy is good for businesses, workers, and consumers. Profits, wages, and spending rise. Shouldn't the Dow Jones Average rise any time the country gets positive economic news?

VISUAL 2
REAL GDP: WHAT DOES IT MEAN?

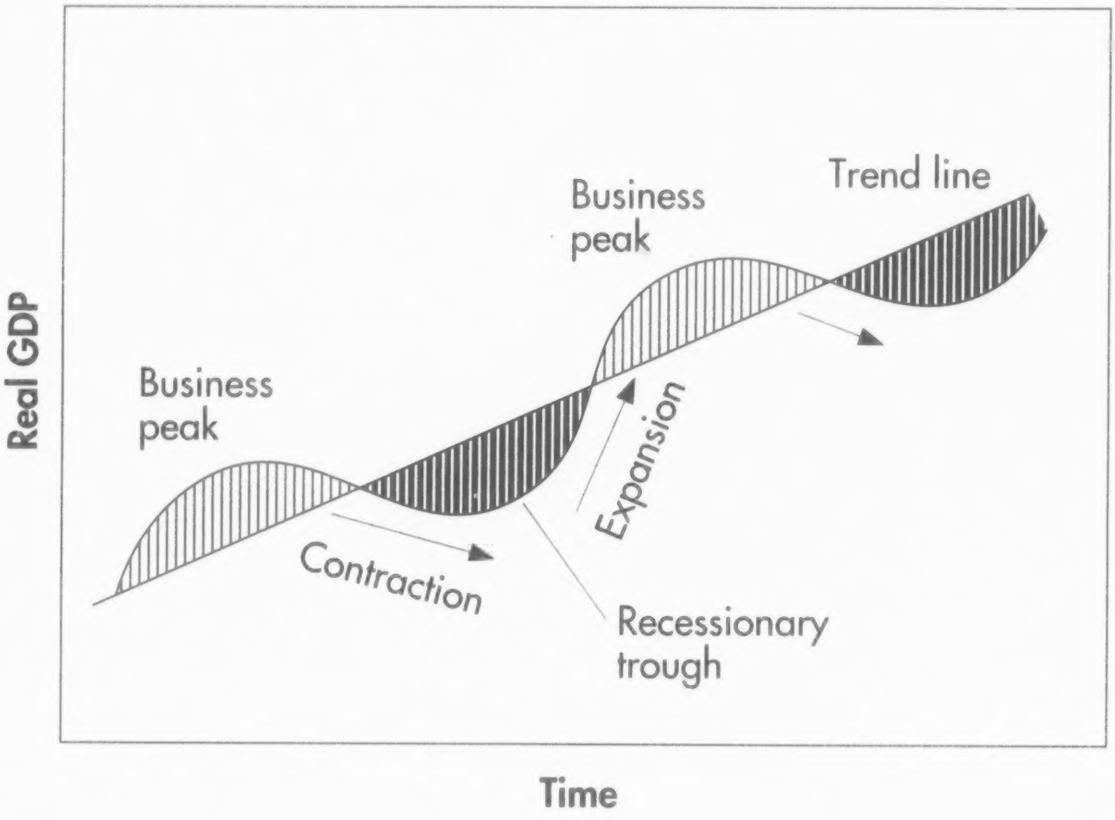
Real Gross Domestic Product is the total market value, adjusted for inflation, of all final goods and services produced in this country during a specific period. It is reported both annually and each quarter (every three months).

VISUAL 3
INSTABILITY IN GROWTH OF REAL GDP



From *Learning from the Market*, © National Council on Economic Education, New York, NY

VISUAL 4
BUSINESS CYCLE DIAGRAM


Real GDP
Business peak
Business peak
Trend line
Contraction
Expansion
Recessionary trough
Time

VISUAL 5
MAIN POINTS OF THE LESSON

1. The economy, as measured by Real GDP, fluctuates in its growth pattern.
2. This fluctuating growth pattern is called the business cycle.
3. The business cycle consists of four phases: business peak, contraction, recessionary trough, expansion.
4. Stock purchasers would like to buy a stock when its price is low and the opportunity for increased business profits is good.
5. Stockholders would like to sell a stock when its price is high and the opportunity for increased business profits is poor.
6. This knowledge of business cycles and interest in future performance will occasionally cause shareholders to sell on good economic news and buy on bad economic news.
7. Stock buyers try to anticipate where the economy is going next. By the decisions they make to buy or sell, they occasionally cause the Dow Jones Average to fall on good economic news and rise on bad economic news.

ACTIVITY 1
WOULD YOU BUY THIS STOCK NOW?

Name ______________________________ **Date** ______________________________

Stock 1
The company is called Travel With Us. Profit figures are up for the tenth quarter in a row. The profit increase for the current quarter was 3 percent. The average profit increase for the previous nine quarters was 12 percent. The current P/E ratio for the company is 21. This is the highest ratio to date in the company's history. The company has been in business since 1902. Current revenue is higher than at any point in its history. The company is in a fiercely competitive market, renting cars, mopeds, and bicycles to tourists vacationing in the United States and Canada. The economy has been growing for five straight years. In the last quarter the Real GDP increased by 1 percent, the lowest percentage increase in the last five years. The unemployment rate has recently increased from 3 percent to 3.4 percent. Inflation is 4 percent and rising. The Federal Reserve Bank recently announced an increase in the discount rate of 1 percent, raising it from 2.5 percent to 3.5 percent. (The discount rate is the rate of interest that the Federal Reserve charges other banks when it lends them money.) Industry sources report that tourist travel is at an all-time high.

1. Would you buy shares of Travel With Us at this time? ____________________

2. What information was most important to you as you made your decision?

____

____

Stock 2
The company is Suppliers General, Inc. It provides spare parts for all machines used in the manufacturing of automobiles, airplanes, motorcycles, and farm equipment. It has been in business for 50 years. Last year was its worst year. It reported zero profit for the entire year. Sales fell 50 percent from their high point three years ago, but showed a slight increase for the last quarter. Its workforce has been cut in half, from 250,000 workers to 125,000 workers, during the last two years. It is operating at 40 percent capacity. Its customer firms all reported small increases of sales during the last six months. Its chief competitor has gone out of business. However, its stock price is at a record low. The company is selling at a price equivalent to one-half its shareholders' equity.

The economy has been in a recession for 18 months. Real GDP rose 1 percent in the last quarter. Inflation is steady at 1 percent. The Federal Reserve Board reduced the discount rate and the federal funds rate for the sixth time in 12 months. The discount rate now stands at 1.25 percent. Economists are predicting that the U.S. economy and the world economy will grow at 3 percent during the next year, with cyclical industries experiencing greater growth than the economy as a whole.

From *Learning from the Market*, © National Council on Economic Education, New York, NY

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ACTIVITY 1 (CONTINUED)

1. Would you buy shares of Suppliers General, Inc., at this time?

2. What information was most important to you as you made your decision?

Stock 3
The company is Coldbgone. For eight years this biotech firm has lost money. It has never earned a profit. Stock prices have fallen from $25 per share to $2 per share as shareholders attempted to rid themselves of this badly performing stock. Your best friend is a lab technician for Coldbgone who tells you that the company has announced a new drug that cures the common cold. The drug will be on sale shortly. Coldbgone will have the patent rights to sell this drug as a monopolist for eight years. After eight years, other companies may also sell the same drug.

The economy has just stopped growing. Last quarter, for the first time in five years, the real GDP declined. Nationwide, companies are reporting lower sales and profits, while forming plans to lay off workers. The Federal Reserve Board has increased the federal funds rate and the discount rate for the third month in a row. Inflation is averaging 10 percent for the current year.
Your best friend is buying 5000 shares of the company tomorrow. He would buy more but he does not have any more spare cash.

1. Would you buy shares of Coldbgone at this time?

2. What information was most important to you as you made your decision?

LESSON 24

HOW DO DOMESTIC AND INTERNATIONAL EVENTS INFLUENCE THE BUYING AND SELLING OF STOCKS?

INTRODUCTION

In this lesson, students learn that events in the world can change demand and supply for a stock.

ECONOMICS BACKGROUND

Some events change the demand for a stock so that people are willing to buy more or less at every possible price. Some events change the supply of a stock so that people are willing to sell more or less at every possible price. Unexpected news that benefits a company can increase the price of its stock. Unexpected news that harms a company can decrease the price of its stock.

LANGUAGE OF ECONOMICS

Change in Demand for a Stock: An increase or decrease in people's willingness to buy shares at every possible price.

Change in Supply for a Stock: An increase or decrease in people's willingness to sell shares at every possible price.

CROSS CURRICULUM SKILLS

Students develop skills in writing, speaking, and group participation.

OBJECTIVE

Students analyze events and predict their influence on stock prices.

MATERIALS

Activities 1 and 2*

TIME REQUIRED

One class period

PROCEDURE

A. Explain to the class that in this lesson they will learn how stock prices can be influenced by unexpected events.

B. Distribute Activity 1, *Samantha's Notable Company*. Have the students read the introduction and, working in pairs, decide whether each headline is good or bad news, and how the news might change the price of Samantha's Notable Company.

1.	Good	↑	7.	Bad	↓
2.	Bad	↓	8.	Good	↑
3.	Good	↑	9.	Bad	↓
4.	Bad	↓	10.	Good	↑
5.	Bad	↓	11.	Good	↑
6.	Good	↑	12.	Bad	↓

C. Explain to the students that they are about to play the role of Stock Price Analysts to the heads of various sectors of the United States economy. Their job is to study a world event to be announced by the teacher and to predict quickly whether stock prices for their industry will increase or decrease. Divide the class into five groups, with one group to represent each of the following areas:

1. Automobile industry
2. Computer industry
3. Banking and financial services
4. Agriculture
5. Publishing

D. Distribute Activity 2, *I Heard the News Today, Oh Boy!*. Allow the class a few minutes to study how various events might influence stock prices.

E. Read the following events and give each group ten seconds to explain whether the events represent good news or bad news for stock prices in its industry. After each event, have the groups report their predictions. The group with the best performance might be given some reward, such as extra-credit points.

F. Event 1: Europe, a major trade partner for the United States, goes into recession.

1. Automobile industry	Bad news
2. Computer industry	Bad news

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*Activity 2 is adopted from *The Stock Market Game Guide*, published in 1990 by the Securities Industry Foundation for Economic Education, Inc., and used here with permission.

3. Banking and financial services	Bad news
4. Agriculture	Bad news
5. Publishing	Bad news

Event 2: War erupts in central Europe.

1. Automobile industry	Bad news
2. Computer industry	Bad news
3. Banking and financial services	Bad news
4. Agriculture	Bad news
5. Publishing	Bad news

Event 3: Floods hurt many towns and farms in the Midwestern United States.

1. Automobile industry	Good news
2. Computer industry	Bad news
3. Banking and financial services	Bad news
4. Agriculture	Bad news
5. Publishing	Bad news

Event 4: Interest rates decline.

1. Automobile industry	Good news
2. Computer industry	Good news
3. Banking and financial services	Bad news
4. Agriculture	Good news
5. Publishing	Good news

Event 5: The federal government encourages cross-state banking to increase competition in the banking industry.

1. Automobile industry	Good news
2. Computer industry	Good news
3. Banking and financial services	Bad news
4. Agriculture	Good news
5. Publishing	Good news

Event 6: U.S. voters elect a "populist" U.S. Congress determined to raise taxes on the rich and increase government regulation on all sectors of the economy.

1. Automobile industry	Bad news
2. Computer industry	Bad news
3. Banking and financial services	Bad news
4. Agriculture	Bad news
5. Publishing	Bad news

CLOSURE

Review the key points of the lesson. Ask:

What sort of events usually mean that stock prices will go up?
(*Events that are favorable to economic growth and stability, such as peace, growing economies, a limited role of government in the economy.*)

What sort of events usually mean that stock prices will go down?
(*Events that are unfavorable to economic growth and stability, such as war, recession, and an expanded role of government in the economy.*)

ASSESSMENT

Multiple Choice Questions

1. The employees at Samantha's Software go on strike. How might this event influence the price of Samantha's Software stock?
   a. Price will likely increase.
   *b. Price will likely decrease.
   c. Price will likely stay the same.
   d. No way to tell.

2. Interest rates go up. How might this event influence the price of stocks?
   a. Prices will likely increase.
   *b. Prices will likely decrease.
   c. Prices will likely stay the same.
   d. No way to tell.

3. Peace takes root in Northern Ireland. How might this change the price of stocks?
   *a. Prices will likely increase.
   b. Prices will likely decrease.
   c. Prices will likely stay the same.
   d. No way to tell.

ESSAY

The majority of voters in Quebec decide to separate from Canada. Explain how this might influence stock prices.
(*Canada is the most important trade partner of the United States. The decision of Quebec to separate from Canada raises uncertainties about how business will be conducted with this new country. Stock prices are nearly certain to go down based on this bad economic news.*)

JOURNAL

Select a world event from the evening news. Explain whether the news is good news or bad news for the United States economy as a whole and predict whether stock prices might go up or go down as a result.

ACTIVITY 1
SAMANTHA'S NOTABLE COMPANY

Name ______________________ **Date** ______________________

Samantha is a computer designing wizard. Her company manufactures a device called Notemaker. It is a small computer that looks like a hand-held tape recorder. It can record a teacher's lecture, save it, and print it out as hard copy or save it on disk. Notemaker has been a big hit with students of all ages.

Samantha's Software has been a successful business for five years, and it is still growing. But Samantha and her colleagues are concerned about how current events may affect the price for the company's stock.

Below are several headlines. Assume that each event is a surprise to shareholders and potential buyers of Samantha's Software. In the column below labeled ***Good or Bad News***, write *Good* if the news is good for Samantha's Software or *Bad* if the news is bad. Then put an ↑ in the last column if the price of the stock is likely to go up. Put a ↓ if the price of the stock is likely to go down. The first item is completed for you.

Headline	***Good or Bad News***	***Price of Stock***
1. Kenya announces plan to improve its K-12 schools. Large order of Notemaker expected.	Good	↑
2. IBM releases its Notemaker. It is twice as powerful and costs half as much as Samantha's.	________	________
3. The price of computer chips declines.	________	________
4. Congress passes a law stating that teachers' lectures are the teachers' private property.	________	________
5. Declining enrollments cause American universities to reduce orders of Notemaker.	________	________
6. A new study finds that students who use Notemaker have significantly higher grades than students who take notes by hand.	________	________
7. Samantha announces a decrease in earnings.	________	________
8. Congress passes a large tariff on imported Notemakers.	________	________

ACTIVITY 1 (CONTINUED)

9. Gross Domestic Product begins to fall. People expect unemployment to increase. People cut back on expenditures. ________ ________

10. IBM wants to acquire Samantha's Software. ________ ________

11. Samantha's Software offers a smaller, faster, and less expensive Notemaker. ________ ________

12. Samantha's chief accountant is suspected of fraud. ________ ________

ACTIVITY 2
I HEARD THE NEWS TODAY, OH BOY!

Name ______________________ **Date** ______________________

Type of Event	Good News (Stock Prices Go Up)	Bad News (Stock Prices Go Down)
1. Company's Economic Health	✔ Investors expect future production, sales, and profits to improve. ✔ Advances in technology are reported that reduce production costs. ✔ The company develops new popular products. ✔ The company hires more skilled and responsible managers and workers.	✔ Investors expect future production, sales, and profits to decline. ✔ Products lose popularity. ✔ Someone files a damaging lawsuit against the company. ✔ The company's workers go on strike.
2. Industry's Economic Health	✔ Rapid growth is expected in the industry. ✔ Better supply of resources that companies use to make their products. ✔ Industry exports more goods and services to other countries. ✔ Congress passes a law that will lead to more sales for the industry.	✔ The industry becomes less important in the economy. ✔ Government makes stricter rules for the industry that increase production costs. ✔ Consumers buy imports instead of products made by the industry in our country.
3. Country's Economic Health	✔ Gross Domestic Product rises. (GDP is the sum of the prices of all finished goods and services made in a nation during a year.) ✔ Unemployment rates fall, and more people have jobs. ✔ Interest rates fall. (Interest rates are the cost of borrowing money.)	✔ Gross Domestic Product goes down, and a recession occurs. ✔ Interest rates go up. ✔ Workers have fewer basic skills.
4. Our Government, Our Nation, and the World	✔ Fighting nations agree on a peace settlement. ✔ People elect a president they think will be more favorable to business.	✔ A major oil-producing nation reduces its supply of oil to the world.
5. Stock Market Conditions	✔ People think we are in a bull market (period of rising stock prices that lasts months or even years).	✔ People think we are in a bear market (period of falling stock prices that lasts months or even years).

GLOSSARY

AMEX: The American Stock Exchange, which is one of the organized stock markets in New York City.

Asked (or Offer) Price: The price that sellers are willing to accept for a particular stock at a given time.

At the Market: An order to buy and sell a stock at the best price currently available.

Auction Market: The type of market found in organized stock exchanges. As in an auction, stocks are sold to the person willing to pay the highest price and purchased from the person willing to sell for the lowest price.

Benefits of Trade: The advantages obtained by buyers and sellers when they trade a stock.

Bid Price: The price that buyers are willing to pay for a particular stock at a given time.

Broker: An individual or business that specializes in bringing together buyers and sellers of stocks.

Business Cycle: The fluctuation in the general level of economic activity as measured by such variables as the rate of unemployment and changes in real GDP.

Buying on Margin: Buying stock on credit.

Capital: Human-made resources used to produce goods and services. Capital goods are used by people to produce and distribute goods and services.

Capital Markets: Markets where sellers of securities, such as bonds and stocks, trade with buyers. This activity is essential to corporate financing and allows businesses to start and expand. Capital markets are vital for economic growth.

Change in Demand for a Stock: An increase or decrease in people's willingness to buy shares at every possible price.

Change in Supply for a Stock: An increase or decrease in people's willingness to sell shares at every possible price.

Circular-Flow Model: A model illustrating the interdependence and overall operation of a market economy. The circular-flow model is a diagram that shows how households and business firms interact with each other in the product and resource markets.

Clerk: A member of a brokerage house who transfers orders and information between stockbrokers in an office and floor brokers at a stock exchange.

Commission: The fee a broker and/or stockbroker collects for helping people buy and sell a stock.

Common Stock: A share of ownership in a company. Owners of common stock receive a share of a company's profits—or bear a share of its losses up to the amount invested in the stock.

Competition: The rival efforts of two or more people or businesses acting independently to get the business of others by offering a better price or a higher level of quality in goods or services.

Compound Interest: Money earned on your original deposit and on the interest payments you have received on that deposit in the past.

Corporate Bond: An IOU issued by a corporation in order to borrow money. Owners of these IOUs receive fixed interest payments from the borrowing corporation until the IOU is repaid at a given date in the future.

Corporation: A business that is owned by stockholders and is entitled legally to rights and responsibilities as if it were a person.

Cost: Cost is often expressed in dollars, but true cost is the second-best alternative people give up when they make a choice. The best alternative is the one selected. Cost is often called *opportunity cost* to emphasize the opportunity given up.

Costs of Trade: The time and money buyers and sellers spend to find one another and arrange trades.

Customer: A person who buys the product or service offered by a business.

Cyclical Stocks: Stocks, such as high-priced consumer goods and capital goods, that are significantly affected by business cycle fluctuations. These stocks generally decline more during recessions and show more growth during expansions, than other stocks.

Defensive Stocks: Stocks, such as medicine, food, clothing, and public utilities, that are relatively unaffected by business cycle fluctuations, generally decline less during recessions, and show less growth during expansions than other stocks.

Demand: The different quantities of a resource, good, or service that will be purchased at various possible prices during a specific time period.

Demand (for Stocks): The various quantities of stock that people are willing and able to buy at different possible prices.

Diversification: Buying stocks in various industries.

Dividends: The amount of profit a company pays to its stockholders.

Early Phase of Development: The condition of a company that puts a product or service on the market for the first time; its sales are expected to grow rapidly.

Economic Growth: An increase in an economy's output.

Economize: To base decisions on an assessment of costs and benefits, choosing the best combination of costs and benefits from among the alternatives.

Entrepreneurship: A human resource that combines other resources to produce goods and services: the vision, ingenuity, energy, and risk-taking that people need to create and run a business.

Equilibrium Price: The price of a stock at which buyers want to buy the same number of shares as sellers want to buy. This price is also called the Market-Clearing Price.

Equity Financing: A source of corporate financing through the sale of corporate ownership, stocks, in the primary market.

Factors of Production: The four types of resources used to produce goods and services.

Financial Capital: Assets, such as stocks, that produce income.

Financial Markets: Markets that direct savings into money-type assets (such as stocks, bonds, and bank accounts) that pay households for the use of their savings. Commercial banks, savings and loans, credit unions, insurance companies, brokerage houses, pension funds, and investment bankers are some of the businesses that are found in financial markets.

Floor Broker: A member of a brokerage house who completes a customer's buy or sell order on the floor of a stock exchange.

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GLOSSARY (CONTINUED)

Gain: An increase above the original purchase price in the money received from the sale of stock.

Gambling: Betting money on the outcome of a game, contest, or event where random chance is the main influence on the outcome.

Growth Stock: A stock whose earnings and price are expected to show big increases in the future.

Human Capital: The skills, knowledge, and experience that enable people to be productive.

Incentive: A benefit offered to encourage people to behave in a certain way.

Income Stock: A stock that has paid sizable dividends in the past and is likely to do so in the future.

Industry: A group of companies that produce or sell the same kind of product or service.

Information Costs: The cost of gathering information to make an informed choice in a market economy.

Interest: The amount paid for borrowing someone else's money. This amount is usually expressed as an annual percentage. It is calculated by dividing the amount of interest paid in one year by the amount borrowed.

Investment: The putting to use of money, capital, or time in the hope of getting a profitable return.

Investment Banker: A business that gives a corporation advice on how to raise money and also sells new issues of stocks and bonds.

Labor: The health, strength, education, and skills of people which are used to produce goods and services.

Land: Natural resources or gifts of nature that are used to produce goods and services.

Late Phase of Development: The condition of a company whose product or service has been on the market for a while, and whose sales are no longer expected to grow rapidly.

Limit Order: An order to buy or sell a stock at a certain (or better) price. A buyer's limit order for $20 would be completed only if each share can be bought for $20 or less.

Limited Liability: A legal guarantee that a stockholder's maximum loss is legally limited to the amount he or she has invested in a corporation's stock.

Listed Stocks: Stocks that have been approved and listed for trading by one of the organized stock exchanges. All over-the-counter stocks are unlisted stocks, even when they are quoted by Nasdaq and reported in the newspaper.

Long-Term Investing: Buying stock and keeping it for many years in an effort to have one's money grow in step with stock prices in general.

Loss: A decrease from the original purchase price in the money received from the sale of a stock.

Market: The process through which buyers and sellers exchange with one another.

Market Economy: A system of decentralized decision making in which individuals and business firms, in their various capacities as consumers, producers, workers, savers, and investors, participate in the market through decisions that are reflected in the supply of and demand for various goods, services, and resources.

GLOSSARY (CONTINUED)

Market-Clearing Price: The price at which the quantity of a good or service demanded by consumers and the quantity supplied by producers are equal. This is also called the equilibrium price.

Nasdaq: The Nasdaq Stock Market is an electronic marketplace where more than 5,400 companies list their stocks. Brokers and dealers around the country who make markets in these stocks communicate and trade with each other by computers that are all linked together by the latest technology. Every securities firm has Nasdaq computers that show the changing prices, second by second, as well as every trade that takes place in a stock.

New-Issues Market: A market in which a corporation sells new stock to raise money for start-up or expansion. This market is often called the primary stock market.

NYSE: the New York Stock Exchange, which is one of the organized stock markets in New York City.

Opportunity Cost: The forgone benefit of the next best alternative when scarce resources are used for one purpose rather than another.

Over-the-Counter Market (OTC): The over-the-counter stock market lacks the central trading floors of the formal stock exchanges. Instead, over-the-counter trades occur as brokers and dealers trade with one another by using computers and telephones.

Ownership: The right to use something and enjoy its benefits.

Parent Company: A business that owns and controls another company.

Partnership: A business that is owned and managed by two or more individuals who receive all the profits and bear all the losses.

Pink-Sheet Market: Another name for the OTC market. The "pink sheets" are lists of OTC stocks and the prices at which dealers are offering to buy and sell them. These lists are printed on pink paper and distributed early every morning to the trading community.

Portfolio: A selection of investments used to produce an income or return. Can be financial, as in a stock portfolio, or personal, as in investments in human capital.

Positive-Sum Game: An activity involving more than one person where all individuals can gain money without reducing another person's amount of money.

Preferred Stock: Preferred stock (like common stock) represents ownership in a company. But preferred stockholders receive special treatment because company dividends are distributed to them before being paid to holders of common stock. Preferred stockholders usually are paid a fixed dividend. Should the company go bankrupt, preferred shareholders would receive payment prior to common stockholders.

Price (of a Stock): An amount agreed on between a buyer and a seller to exchange a stock certificate.

Primary Markets: Those markets in which stocks are offered for sale the first time.

Private Property Rights: Laws or customs that allow individuals to retain the benefits of property ownership for private use.

Product Markets: The markets where goods and services are bought and sold.

Productivity: The amount of goods and services produced for each hour of work.

GLOSSARY (CONTINUED)

Profit: The difference between revenues and the costs entailed in producing or selling a good or service; it is a return for risk-taking.

Quotes: The highest price bid by a buyer and lowest price asked by a seller for a stock at a given time. Quotes are usually expressed in dollars and fractions of a dollar. For example, at one time a share of Apple Computer was quoted at 27¾, which meant $27.75.

Real Gross Domestic Product (GDP): The total market value, adjusted for inflation, of all final goods and services produced in this country during a specific period.

Recession: A decline in the Real Gross Domestic Product (GDP) for a period of at least six months. During a recession, businesses produce fewer goods and services.

Relative Prices: One price compared to another, or the ratio between prices. A collection of relative prices constitutes the price structure of a market.

Resource Markets: The markets where land, labor, capital, and entrepreneurship are bought and sold.

Resources: The land, labor, capital, and entrepreneurship required to produce goods and services that people want.

Retained Earnings: The amount of profit a company keeps to buy new equipment, buildings, and other resources that the company uses to expand and modernize.

Return: The amount earned on one's savings or investment. This amount is usually expressed as a yearly percentage.

Risk: The chance of losing money. Risk is the opposite of safety.

Saving: Setting aside some of today's income for future spending.

Savings Account: A bank account that pays interest on the money deposited.

Secondary Markets: Those markets in which stocks can be bought and sold once they are approved for public sale.

Short Cover: The buying back of a stock originally borrowed from a broker in a short sale.

Short Sale: Sale of a stock borrowed from a broker.

Short-Term Investing: The buying of stocks in order to sell them quickly in an effort to have one's money grow faster than the general level of stock prices.

Sole Proprietorship: A business that is owned and managed by one individual who receives all the profits and bears all losses.

Specialist: A broker on an exchange who trades in certain stocks at a specific location (post) on the trading floor. Each specialist has an assigned post where all trading of particular stocks occurs. Specialists quote the current prices of stocks traded at their posts and they complete limit orders.

Specialization: A situation in which people concentrate their efforts in the areas where they have an advantage. Examples would include farmers in Kansas who specialize in growing wheat and farmers in Florida who specialize in growing citrus fruit.

Standard of Living: A measure of an individual's or a family's quality of life. People have higher standards of living when they have more goods and services, more leisure time, and so forth.

GLOSSARY (CONTINUED)

Stock: A share of ownership in a company. Owners of stock receive part of the company's profits—or bear some of its losses up to the amount of money they put into the stock.

Stockbroker: A broker who accepts orders to buy and sell stock and then transfers those orders to other people who complete them.

Stock Exchange: One of the organized stock markets with a centralized trading floor. In this market, auction-type trading allows traders to sell stocks to the highest bidder or buy stocks from the lowest supplier. These markets consist of the New York Stock Exchange and the American Stock Exchange, both of which are located in New York City. Also included are the regional stock exchanges found outside of New York City. These are the Boston, Cincinnati, Intermountain (Salt Lake City), Midwest (Chicago), Pacific (Los Angeles and San Francisco), Philadelphia (Philadelphia and Miami), and Spokane stock exchanges.

Stock Market: A market in which the public trades stocks that someone already owns. This market allows people to buy and sell stocks quickly and easily. Examples are the New York Stock Exchange and the American Stock Exchange. This market is often called the secondary stock market.

Stock Table: An alphabetical listing of the transactions on the stock exchanges.

Supply (of Stocks): The various quantities of stock people that will offer for sale at different possible prices.

Supply: The different quantities of a resource, good, or service that will be offered for sale at various prices during a specific time period.

Unemployment Rate: The percentage of people in the civilian labor force who have no jobs but are actively looking for work.

Venture Capitalist: Individual or organization that invests in new businesses in exchange for partial ownership of the company.

Voluntary Exchange: A trade or transaction between a willing buyer and a willing seller.

Zero-Sum Game: An activity involving more than one person where someone can gain money only if another person loses an equal amount of money.

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